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Medical Library

THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—31ST YEAR. SYDNEY, SATURDAY, AUGUST 5, 1944. No. 6.

COMMONWEALTH OF AUSTRALIA — DEPARTMENT OF HEALTH

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Table of Contents.

[The Whole of the Literary Matter in THE MEDICAL JOURNAL OF AUSTRALIA is Copyright.]

ORIGINAL ARTICLES— Page.
An Address, by E. A. H. Russell 125
Closed Intrapleural Pneumonolysis, by C. G. Bayliss 129
Irritation Produced by the Procession Caterpillar (Ochrogaster Contraria), by H. Flecker and Anthony McSweeny 137
REPORTS OF CASES—
Scrub Typhus: An Unusual Case Simulating Mumps, by H. S. Patterson 138
REVIEWS—
The Work of Sir Almroth Wright 138
LEADING ARTICLES—
The Prevention of Neonatal Deaths 139
CURRENT COMMENT—
The Older Worker 141
Pain Referred from Skeletal Structures 141
ABSTRACTS FROM MEDICAL LITERATURE—
Pathology 142
Morphology 143
BRITISH MEDICAL ASSOCIATION NEWS— Page.
Annual Meeting 144
Scientific 148
CORRESPONDENCE—
Medicine and Sociology 149
NAVAL, MILITARY AND AIR FORCE—
Appointments 150
Casualties 150
OBITUARY—
George Henry Standish Lightoller 150
Thomas Patrick Connolly 151
NOTICE—
A Correction 151
AUSTRALIAN MEDICAL BOARD PROCEEDINGS—
Queensland 151
NOMINATIONS AND ELECTIONS 152
BOOKS RECEIVED 152
DIARY FOR THE MONTH 152
MEDICAL APPOINTMENTS: IMPORTANT NOTICE .. 152
EDITORIAL NOTICES 152

An Address.[1]

By E. A. H. RUSSELL,

President, South Australian Branch of the British Medical Association.

IN seeking a choice of subjects for my address this evening, I decided, as the most appropriate course, to review the agenda papers which have been placed before your Council throughout the year and select from them what, in my view, was the topic of outstanding interest and importance. The question which I find has appeared with challenging regularity and has involved a great amount of thought and time for all of us is that of "Plans and Planning". Further, in order that the considered opinion of Council, based on the wealth of expert advice given by you, the practising members of our profession, may receive more consideration by governing bodies, I shall also refer briefly to publicity.

In the short time at my disposal much must be left unsaid. It may appear that our members abroad on active service have been somewhat overlooked. I would hasten to assure them that that is not the case by any means, for the vigilant eye of Council has ever been turned in their direction, because we realize that they will carry on the future medical service for the benefit of mankind. With so many medical practitioners away on active service, the time is inopportune for any discussions to take place unless this group is afforded every facility to take part. They must not be committed unless they are given this privilege, and the Federal Government would be well advised to honour its promise to them. Such subjects as post-graduate study, and equitable replacement in a peace-time medical service of this group along the paths that each individual desires, are integral and essential parts of any plan, which must be tempered accordingly with the help of our absent colleagues.

[1] Read at the annual meeting of the South Australian Branch of the British Medical Association on June 29, 1944.

It is obvious that, for an efficient medical service, two main functions must be achieved, otherwise the service, whatever form it may take, will assuredly break down and inefficiency result. First and foremost, the community must be satisfied with the service it receives. And secondly, the profession must not only be satisfied with the opportunities afforded it to use its great resources to serve the community efficiently in matters purely medical, but also be confident that all other considerations which may indirectly affect the health of the community are receiving sympathetic attention to maintain it, as far as is humanly possible, in health and vigour and efficiently to treat it when sickness supervenes. This introduces a multiplicity of questions over which the medical practitioner has no direct control. Any measure that would have this end, and only this end, in view would, I believe, be acceptable to the profession. When, however, other considerations enter the field, as so often has happened in the past, then the medical services cease to be for the benefit of the community, and become a matter of expediency. This dangerous tendency should receive our forthright condemnation.

Our Federal Council, as you know, put forward a plan for a general medical service for Australia. In this plan were enunciated certain principles, and, as would be expected, the first consideration was: "That the system of medical service should be directed to the achievement of positive health and the prevention of disease, no less than to the relief of sickness." That must surely be the genesis of any plan for any medical service. The British Medical Association plan aims at a gradual improvement in our existing medical system, how and when and where such improvement is necessary, with as little disruption as possible of the existing service. I would suggest that the implementation of the principles of the British Medical Association scheme should generally be undertaken without undue haste. I am forced to the opinion that the protagonists of an entirely altered medical *régime* have so far so little to offer that any practitioner mingling constantly with the sick public would condemn it forthwith as inefficient, and definitely not in the best interests of the public. Any further pronouncement by the British

Medical Association may be eagerly awaited for both inspiration and criticism. I deprecate the idea that the British Medical Association must of necessity put forward a complete scheme as if to defend its own against some other. In my opinion the weight of practical experience of the medical profession supporting the British Medical Association plan forbids any precipitate action. In certain directions, however, an increase in tempo may seem desirable. I shall speak of that later.

Opposed to the British Medical Association plan are other ideas going so far, more or less, as the complete regimentation of the medical profession in a salaried medical civil service under a departmental chief who, in turn, would take his instructions from, or at least be influenced by, the government of the day. While it is advisable that any government should primarily rely on the efficiency of its own departments for carrying out the duties assigned to them, in medicine those duties have their limitations and must not be permitted to stray too far afield. It would be an ambitious plan, indeed, that would repose in a department dictatorship over the whole of the medical service in all its varied phases and ramifications in Australia. Such a department, linked up as it would be so closely with a government, would not only tend in itself to become bureaucratic, but would function at the suggestion of the Government, rather than the Government acting on the advice of the department on health matters. If its advice was not accepted by a government, what would happen? Lay governments, inexpert in highly technical medical matters, might then introduce measures, free from authoritative criticism, that would affect the health of the people prejudicially, or they might fail to introduce urgent health measures which would be detrimental not only to the health of the present generation, but also to that of generations yet unborn. We must frankly admit this probability—in fact we must realize that it has happened in the past. It is, therefore, our duty to plan to correct this anomaly if Australia is to remain healthy. The medical profession can afford full protection to the public only by so retaining its identity that it may, free from political control or political bias, criticize any measure likely to be a menace to the health of the community.

I have no new plan, as such, to revolutionize our medical services that I can offer you. The more I read and delve into the depths of such an idea, the more sceptical I become, the more distrustful I become. Sceptical, because in my opinion such a plan is unnecessary, is wrong in principle, would be detrimental to the health and well-being of the community, would be short-lived, but yet would so stifle initiative as to have a disastrous effect on medical practice and so on the health of the community for years to come. Distrustful, because, for some unaccountable reason, the main function of a medical service which is the maintenance of the health of the community and the care and treatment of the sick, has been in the past relegated in so many instances to a subordinate position.

My emphasis that I have no new plan to place before you to revolutionize our medical service, is strengthened by the fact that the members of your Council, with whom I have had the great honour to be associated during my many terms of office, more particularly during the last twelve months, have on many occasions deliberated long into the night, earnestly studying new plans from every point of view, and have rejected them. I have fully appreciated, and it cannot be too highly stressed, that your councillors are all experienced gentlemen, representing many phases of medical thought, are all in active practice and consequently conversant with the requirements necessary for maintaining the health of the community and treatment of the sick. They have in their wisdom continued to consider and place before governing bodies from time to time valuable suggestions to strengthen the weaker links of our medical service chain. In too many instances, however, their efforts have been frustrated by, it would appear, a consideration other than that which would benefit the health of the community. The plans so far placed before Council to alter the fundamental principles of our medical service have in the main been propounded by gentlemen who, however sincere, have either not practised medicine or who, at most, have practised only for a short period and who, by their suggestions, are obviously not *au fait* with all phases of a complete medical service, especially the personal side which is such an essential in maintaining the health, confidence and morale of the community.

Before accepting as proven the idea put forward by a few that all is so wrong with our medical service as to necessitate something entirely new, let us take a fleeting glance into the past and see what has happened in greater spheres in older countries when, unfortunately, something new seemed desirable. Is there not something that may be learned therefrom? The obsession to "scrap" the old and "ring" in the new is not altogether unknown. It is a complaint that throughout the chapters of history, we find, has been epidemic from time to time. The subsequent pages of history reveal malignant sequelæ that have caused much suffering. Throughout history the change-over from the old to the new has in effect revealed itself chiefly in a transfer of power by the credulous majority to an ambitious minority accompanied by a complete regimentation of the former by the latter. Much success has invariably attended the venture for a time until the bounds of safety have been overstepped, and then has come the sad day of retribution accompanied by a lowering of the standards previously enjoyed but foolishly yielded by the credulous masses, the inevitable national loss during the period of readjustment, and the serious check to consistent and prudent progress.

The so-called new order—whatever that may mean—an indefinable something much beloved of the theorist—has had one chief prerequisite—it must be something totally different from the old, because the old was supposedly totally incorrect. The plight of Germany and Italy are notable examples of this process today. In these cases two men with insatiable ambition and intolerable vanity overstepped the bounds of safety, journeyed too far afield and too quickly, in utter disregard of the expert advice of their professional superiors. Both Hitler and Mussolini, the perpetrators of new orders, with a fatuous idea of erecting for themselves a monument that would last, it was said, for a thousand years, leave in their retreat millions of smaller monuments erected to the masses, as a warning, let us hope, to others to beware of such an ambitious procedure as a new order. But no, the smaller monuments decay, a new generation is born and the process is repeated.

It has been so plainly demonstrated that the passion for power has so often affected individuals in the past that under the guise of doing something worth while for the State the real ego sooner or later has come uppermost and has brought disaster to the State. History has many such examples to guide us when other little corporals with consummate impudence have assumed the insignia of commander-in-chief. Is it not amazing that perhaps the most important lesson man learns from history is that man does not learn from history; otherwise in so many cases history would not repeat itself, there would be no opportunity for it to do so. Lately this obsession has become pandemic, and it would appear that our medical service is not immune, but has been caught up in the maelstrom.

One cannot view the present and immediate future without concern, for it would appear that those very principles which have dominated enemy countries, and are so detestable to democracies, and to eradicate which we have waged war to retain our freedom of thought and action, are gradually being incorporated in our own way of living. I do not wish to imply that our little domestic troubles are to any extent comparable to the disasters that have befallen nations. They are not. There is, however, a certain similarity that engenders at least scepticism, if not actual distrust, in the idea that an accepted order can be suddenly uprooted by any nebulous new order without disaster to the populace.

In applying to our present problem the servile acceptance of a new order by some of the old countries in former

years, it cannot be over-emphasized that the peoples and standards of the old and new worlds differ considerably. Australians are essentially individualists, and of these recognized individualists the members of the medical profession are probably the most individualistic. Their very training insists that they take the necessary and immediate action that their grave responsibilities demand, without reference to regulations or higher authority. Is it reasonable, therefore, to imagine that the public and profession would countenance the destruction of a service which has taken competent men, whom we remember with such profound respect, years of careful thought and application to establish, to be replaced by something totally new and untried?

There is, to my mind, a sad lack of appreciation of the psychology of both the public and the profession in this democracy of ours when it is suggested that both the public and the profession should forfeit their undoubted rights to be so regimented under a salaried medical service with all its attendant disabilities, restrictions, regulations and, yes, punishments. I would call to your memory the dictum of the immortal Edmund Burke, the great statesman and philosopher, who, in one of his last essays, "Reflections on the Revolution in France", stated:

> The moment you abate anything from the full rights of men and suffer any artificial positive limitation upon those rights, from that moment the whole organization of government becomes a consideration of convenience.

I would ask you to consider this passage written nearly one hundred and fifty years ago, but nevertheless so applicable today, and decide for yourselves whether some of the projects that have been placed before you recently do not emphasize the truth of Burke's statement: "That the whole organization of government becomes a consideration of convenience." If you are satisfied on this point ask yourselves for whose convenience. If then you believe that they be not for the benefit of the populace as a whole I ask you to cast them forth. Further, the great Burke wrote:

> The science of constructing a commonwealth, or renovating it, or reforming it, is like every other experimental science, not to be taught "a priori". Nor is it a short experience that can instruct us in that practical science. Very plausible schemes with very pleasing commencements have often shameful and lamentable conclusions. It is with infinite caution that any man ought to venture upon pulling down an edifice, which has answered in any tolerable degree for ages the common purposes of society, or of building it up again, without having models and patterns of approved utility before his eyes.

I would suggest to you that our own particular edifice has been well and truly constructed by sincere and loyal workmen who have had long and, above all, practical experience of their craft under the vigilant eye of at least qualified architects. This edifice of ours "has for ages fulfilled the common purposes of society", and with necessary alterations and additions from time to time under the capable guidance of the same qualified architects will continue to do so long into the future. I would further suggest to you that some at least of the "models and patterns" for the proposed totally new edifice so far published, impress more by their inefficacy than as something in the nature of an "approved utility". Burke advises "infinite caution". Can anyone possessing a practical, as opposed to a theoretical, knowledge of his craft doubt for one minute the wisdom of Burke's utterance? If the great Burke is correct and the vast practical experience of the medical profession both here and in England is of any value at all, we should be very careful before accepting any drastic alteration from the *status quo ante bellum* of our medical service.

One does not wish to suggest that all is well with our medical service. It is not; neither will it be so at any particular time in the future. What I do wish to stress is that all is not so ill with the service as to demand something totally new and untried. Our service to the community cannot remain static; nor has it remained static. It must be ever changing to meet the demands that positive scientific advancement in the march of time dictates, but does this suggest any drastic disruption of our service for some nebulous theoretical idea that has not stood the test of practical experience? Does it not strongly suggest a gradual metamorphosis that it may effectively meet fresh problems how and when and where they present themselves?

Our medical service, as it exists at present, falls naturally into two categories. Firstly, the undeniable prerogative of both patient and doctor to be unfettered in the freedom of mutual choice and action, as individuals in a community, for the mutual benefit of the two individuals concerned, constituting private practice. Secondly, the duty of the State to undertake certain responsibilities and impose certain conditions on both patient and doctor, together with all other members of a community, for the benefit of the community as a whole, call it if you wish, State medicine. Is one or the other, or both, drastically at fault? In the consideration of these two categories, bear in mind throughout, if you will, that they who are served and they who serve should be the best judges of the efficiency of the service generally. In private practice the democratic prerogative of freedom of choice afforded both patient and doctor is the essential factor that commands confidence on the one part and efficiency on the other. If dissatisfaction exists on either side, a mere telephone call adjusts matters to the mutual satisfaction of both. Once this balance is upset, a dissatisfied public and a disgruntled profession would be the inevitable result culminating in a service that would be prejudicial to the well-being of the community.

A close medical friend of mine, one whose advice based on vast experience I eagerly seek at all times, interested me considerably when discussing a national salaried medical civil service. He told me that he conducts, for his own benefit when time permits, a miniature Gallup poll amongst his patients. He said that the result of his own investigation was astounding. He related the case of a young woman whom he brought into the world some twenty-five years ago and whose family he had treated through four generations.

The young woman sought advice as to whether she should have a second child, as eclampsia had complicated her first confinement. On reassuring her that all would be well, he said: "But how would you react to the possibility of having three different doctors, unknown to you, visiting you on the same day as I alone did in your last confinement?" The patient replied that "if that were a possibility—definitely no more babies for me".

This is not an isolated case, and any scheme that would deny that young woman and thousands like her the privilege of consulting the doctor in whom she had such confidence would be playing with fire indeed and the flames would soon become destructive.

Surely the greatest freedom of thought and action that can be given the individual, consistent with decent ethical behaviour to the community, and the least possible interference by the State, is the very basis of democracy and is most desirable in a medical service. I cannot bring myself to believe that any scheme that would reduce a highly trained young medical practitioner to a mere automaton—a rubber stamp—that would compel people to consult him unwillingly or would expect him to attend those people, could perform anything but a grave disservice to the State.

Mr. Winston Churchill, after paying a glowing tribute indirectly to his private medical personnel, I take it of his own choice, in one of the many epic speeches delivered by him, in March of last year stated:

> We must beware of trying to build up a society in which nobody counts but the politician or the official. Our people would be the last to consent to government by bureaucracy. Freedom is their life blood.

Both Edmund Burke and Winston Churchill, a very formidable pair, one must admit, have declared in general terms against any interference with the "full rights of men" in which "nobody counts but the politician or the official". Further, the delegates of the British Medical Association representing all England in September last voted 210 to 10 against a virtual State-controlled medical

service. Still further, the medical profession in Australia has declared against such a service. Finally, your patients are averse to it—ask them and judge. The sacred doctor-patient relationship has been in the past, is, and, I venture to predict, shall continue to be, the unaltered basis of any medical service in any democratic country in spite of any attempt to alter human psychology and sociology overnight.

One could not have a more convincing example of the efficiency and elasticity of private practice, and tacit appreciation of it by the public, than the magnificent manner in which the practising profession has stood up to the strain placed upon it in this, the fifth year of war. It must be remembered that the young and fit members of the profession who would normally do so much of the peace-time work, are away on active service. They have taken with them the young healthy athletic soldier whom you would seldom see in peace time. Further, because war is destructive of human beings, there is comparatively a far greater percentage of medical officers in the services than in civil life, so that you who remain and are yourselves unfit for service (many of you would have been in retirement had it not been for your downright loyalty to the community) have to cope with the "bad risks" who are the aged, the unfit and the children. Added to your duties are part-time military service at home and those services connected with various wartime organizations. Even in the face of all this extra stress put upon you, one hears no complaint from the public concerning your private work. Would this be improved under any other scheme? What then! This brings me to the second portion of the medical service, namely, the duty of the State to undertake certain responsibilities for the benefit of the community as a whole. I would say unhesitatingly that it is in this category that serious complaints have arisen, from both the public and the profession in its effort to protect the public, and here must alterations be effected.

If you believe my judgement is in error, scan for yourselves the daily Press and see if all is well with such subjects as "the control of tuberculosis", "adequate housing", "equitable distribution of manpower to keep open hospital beds, to cope with increased population in certain districts, owing to new munition factories", *et cetera*. The health of the community is dependent on all such questions.

The failure of the State to keep abreast of the health needs of the community *pari passu* with modern requirements, in spite of the expert advice and warnings given by you, who in every phase of medical thought are so highly qualified to advise and warn, is in my opinion the fundamental cause of our medical ills, and the remedy is inseparable from the removal, or alleviation, of that cause. I could give you many examples that have come before me during my several terms of office as your councillor, in which the benefit of the most expert medical advice on purely medical subjects has been denied the community, because the powers that were did not think fit to utilize that wealth of knowledge born of hard practical experience amongst the suffering for the betterment of the health of that community. This is the grave danger the community would encounter under a State-controlled medical service. Time will not permit me to mention more than two.

Firstly, tuberculosis. I have chosen tuberculosis as an example because its neglect involves, over the course of a considerable period of time, both liberal and labour governments in both State and Federal Houses; hence I divorce myself from party politics. Further, in so stressing the necessity for preventive measures to cope with this deadly disease, the profession has a recorded and adequate answer to the unworthy suggestion, expressed periodically, that its actions are dictated by personal monetary considerations. Not that such answer is really necessary, because the profession has carried on its broad shoulders, since medicine was, the undoubted government responsibility of the medical care of the indigent, unemployed and unemployable, and countless other charities unproclaimed from the house tops. This somewhat bulky file I present to you contains a number of representations made to various governments on this preventible disease, which kills thousands of our kith and kin annually and incapacitates many thousands more. Included in this file are suggestions from such experts as chairmen of central medical boards of health and medical gentlemen specializing in tuberculosis. The first report on "the control of consumption" was submitted by Dr. W. Ramsay Smith, Chairman of the Central Board of Health, South Australia, pertaining to "The Resolutions of a Conference of Local Boards of Health held at Unley in July, 1909". The most recent communication is in March of this year. Dr. Ramsay Smith intimated that in 1909 the loss to the State of South Australia in cold cash through deaths from consumption was £160,000, and South Australia is about one-tenth of the Commonwealth. There have been approximately 100,000 deaths from respiratory tuberculosis in Australia since 1909. It is reasonable to suggest that at least 25% or 25,000 deaths might have been prevented had you been given the necessary facilities, firstly, to prevent, and, secondly, to treat this deadly disease efficiently. The physical and mental suffering of those consumptives and the anguish of the hundreds of thousands of their near relatives cannot be expressed in terms of money. The control of tuberculosis is the duty of the State, not the individual medical practitioner, and the State has had ample opportunity to cope with it during the last thirty-five years and has not done so.

My second example is the *Pharmaceutical Benefits Act*, 1944. I have previously stated that the plans so far placed before you to revolutionize our medical services impress more by their inefficacy than as something in the nature of an approved utility. The *Pharmaceutical Benefits Act* is an example of my contention. This time the Federal Government did not have the benefit of your advice because, I understand, it was not sought. I would draw attention only to clause 22 of this act, which states:

> A Medical Practitioner shall not write a prescription in accordance with any prescribed form unless he is satisfied by personal examination of the person in respect of whom the prescription is written, that the Pharmaceutical Benefit specified in the prescription is necessary for the treatment of that person.
>
> Penalty £50 or imprisonment for three months.

I cannot interpret clause 22 of the *Pharmaceutical Benefits Act* in any other way than that compliance with the act would mean that the medical profession is forbidden by law to relieve human suffering as speedily as possible. What then is our function?

It would be interesting to know who are responsible for such advice to the Federal Government. I think the public should know. It would seem that a patient whom you have treated periodically for years for some distressing, but not deadly, condition, and whom you could not visit immediately when called, would be kept in distress for possibly hours until you could verify by "a personal examination" and write a prescription on the all-important "prescribed form, etc. etc." for a condition you know so well. The unnecessary suffering that the woman in labour would endure by such a measure I shall leave you to consider. If this act is to attain its objective, namely, free medicine for all, clause 22 insists that you permit your patient to suffer unnecessarily or you break the law, and suffer the uncouth indignity of going to gaol for three months. We would all meet down yonder and there would then be nobody left but the administrators to carry out the terms laid down in the act, and incidentally to treat the sick of Australia, which would embarrass both.

With these two examples, which so thoroughly demonstrate the ineptitude of governments to appreciate essentials in medicine, I would suggest that never before in the history of Australia has any governing body been in such dire need of competent advice on technical medical matters to safeguard the health of the masses. Governments must rely on such advice, and they must receive it from competent men versed in all phases of medical practice. It is along these lines that I would ask you to continue to direct your planning.

It is our duty, for instance, to impress on the Federal Government the wisdom of applying the millions of pounds necessary to operate the *Pharmaceutical Benefits Act*,

added to the millions of pounds lost to the State through death from consumption, to an organized campaign to prevent tuberculosis rather than to the production of a formulary which may, or may not, provide a cough medicine to relieve the distress caused by a chest ridden with tuberculosis at the consumptive's journey's end.

On health matters we, and when I say "we" I include the public whom we serve, are greatly dependent on the authoritative voice of Federal Council to place before the Federal Government the needs of the profession in carrying out its responsibility to the public. Never before has the Federal Council shown up to such advantage by the strength of its utterances in denouncing so-called health measures that are of little or no health value. It has honoured the great trust placed in it by Branch councils and, through Branch councils, the wishes of the practising members of the profession who collectively appreciate in its entirety a complete medical service for the protection of the public. Whatever may be the constitutional relationship between the Federal Council and the various Branch councils and members of the profession in the States, it is perfectly obvious, inasmuch as Federal members carry to the conference table the wishes of Branch councils, which are in turn the wishes of the profession, that they must have the power and feel confident to speak for the profession as a whole when not so directed. Your Council, with a full appreciation of your desires, and the democratic manner in which your Federal delegates assume office, has never hesitated for one minute in placing full power in the hands of your Federal delegates. It has not, in one single instance, had cause to regret its action. If there should be the slightest doubt in the minds of Federal delegates on this matter, Federal Council is placed in an invidious position—Branch councils in a hopeless position of disunity—and you capitulate with an accompanying deterioration in the health of the community.

How, then, can the medical profession, through Branch councils in dealing with State matters and Branch councils through Federal Council in dealing with Federal matters, more effectively bring to fruition the advice on health matters generally that has been so willingly and ungrudgingly tendered governing bodies by the British Medical Association in the past and has failed to achieve beneficial results for the community? Our first duty in the fulfilment of our mission as medical practitioners is, of course, to the community, both in health and in sickness. The individual member of the profession has loyally carried out his obligations to the individual member of the community in his private practice; otherwise there would be no private practice for that individual under existing conditions of freedom of choice.

In order that we may further serve the community, we cooperate with and advise the Government of the day. Whatever shade of political thought it represents is of no consequence at all. It is the servant of the people whom we also serve. Branch councils have never shirked that responsibility with State governments, and Federal Council has acted accordingly with the Federal Government. Councils have at all times stated their willingness to advise and loyally support governments in any health measure that would benefit the community. The last clause is a very necessary proviso.

If we then fail, as we have so often in the past, to obtain support from governments for urgent health reforms that would be of undoubted benefit to the community, we should acquaint the public in the lay Press of the ungarnished truth of our efforts to save life and suffering. This is an urgent matter, and should be undertaken fearlessly, irrespective of any obstacle whatever that may appear.

Recently much benefit has accrued to the public by blunt statements of fact in the lay Press on irritating restrictions, anomalies and inefficiencies. There is still much to be done. We must modify our innate detestation of appearing in print, and this can be accomplished only by authoritative statements from councils.

My remarks have been guided by the conviction that during the war everyone and everything are so regimented and controlled that the mind of man is apt to become warped. He thinks in terms of war and control and regimentation, and yields accordingly. Because of the war and so of necessity, people must forgo certain freedoms, and cheerfully do so from a keen sense of loyalty and duty to their country. This is but a temporary phase and must certainly be recognized as such. After the war saner counsel will prevail. Our virile, individualistic Australians will eagerly cast off the yoke of wartime regimentation and our former democratic way of living will return. Our plans and planning must be in terms of a peace-time medical service with peace-time activities ahead.

So I would leave you with these thoughts.

1. Continue with your plan, as previously, that you may further construct our medical service how and when and where the community may mostly benefit.

2. Continue, as previously, to direct your planning in full cooperation with governing bodies, whatever shade of political thought they may possess.

3. But if they fail you, your many public-spirited friends in Parliament and above all the public will finally have reason to be grateful to you for fearlessly and persistently directing attention in the lay Press, through your councils, to any anomaly that would prejudicially affect the health of the community.

The future progress of the State is inseparable from the health of the community, and that is to such a great extent in your very capable hands. May you remain unfettered and unhindered in order that you may carry your grave responsibility efficiently.

It behoves you and others to remember then that: "It is with infinite caution that any man ought to venture upon pulling down an edifice which has answered in any tolerable degree for ages the common purposes of society, or of building it up again without having models and patterns of approved utility before his eyes" (Edmund Burke). And: "We must beware of trying to build up a society in which nobody counts but the politician or the official. Our people would be the last to consent to government by bureaucracy—freedom is their life blood" (Winston Churchill).

CLOSED INTRAPLEURAL PNEUMONOLYSIS.

By C. G. BAYLISS,
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IN 1882, Forlanini[30] of Milan proposed the induction of artificial pneumothorax in patients suffering from pulmonary tuberculosis, and in 1894[31] he published his experience with the first patients to be submitted to this form of therapy. In 1885 Cayley had reported the case of a tuberculous patient in whom he had induced pneumothorax to control hæmoptysis, and in 1888 Potain, who used a manometer to measure the intrapleural pressure, published work on air replacement in tuberculous patients who had suffered spontaneous hydropneumothorax. Forlanini, however, was the first to induce pneumothorax with the objective of controlling the tuberculous process in the diseased lung itself. Following Forlanini, the next significant advance in artificial pneumothorax therapy was due to J. B. Murphy of Chicago, who in 1898 urged the use of radiology to control the degree of collapse. With the routine use of the manometer by Saugman in 1904, the technique of artificial pneumothorax was placed on a sound basis, and by about 1910 this procedure had begun to take its place as an established form of therapy in pulmonary tuberculosis.

Early in the history of artificial pneumothorax the significance of pleural adhesions in preventing effective collapse was recognized, and in 1894 Forlanini[31] wrote that "the pleural adhesions limit the volume of the pneumothorax and therefore its curative value". Matson,[32] from an experience of 1,500 patients suffering from pulmonary tuberculosis treated by artificial pneumothorax,

found that 40% of failures were due to pleuritic adhesions which prevented satisfactory collapse. Alexander[3] states that diffuse adhesions prevent induction in about 20% of attempts at artificial pneumothorax, and that in approximately 42% to 50% of cases, adhesions allow only partial pneumothorax, insufficient to bring about complete healing of the lesion.

It was inevitable, then, that attempts to devise methods of freeing adhesions should be made, and in 1908 Friedrich of Marburg divided adhesions through an incision made into the pleural cavity; this operation, known as open intrapleural pneumonolysis, continued to be practised for a number of years, but owing to the high incidence of serious complications, "died", as Newton[12] has put it in discussing this procedure, "a natural and deserved death".

In 1913, Hans Jacobaeus of Stockholm devised the operation of closed intrapleural pneumonolysis. In the Jacobaeus operation, two cannulæ are introduced into the pleural cavity through suitable intercostal spaces. The adhesion to be freed is visualized by means of a thoracoscope passed through one cannula, and division of the adhesion is effected by a galvano-cautery passed through the other. In 1915 Jacobaeus[13] published a report of his first series of patients submitted to this operation. In 1922, Unverricht, who, according to Alexander[3] writing in 1937, had at that time had a wider experience than anybody of this operation, published a paper on thoracoscopy. In 1934 Moore[17] published a series of 2,043 cases collected from the reports of 41 surgeons. Among those who have reported series of cases since 1934, are Chandler[5][6] (1937), Anderson and Alexander[1] (1937), Brock[2] (1938), Drash[9] (1938), Edwards and Lynn[9] (1939), Newton[12] (1940), Thompson and Greenberg[19] (1941), Carp and Kornblith[4] (1942), and Goorwitch[12] (1943), who reported the results of 413 operations performed by four surgeons on 365 patients.

Structure of Adhesions.

As seen through the thoracoscope, adhesions display a wide variety of forms, ranging from thin cords and narrow bands to wide, thick membranes of a complexity almost impossible to describe, and to areas where the lung is densely adherent to the chest wall over a wide extent.

Brock[2] has discussed the formation of adhesions. Normally, external to the parietal pleura is a thin layer of loose areolar tissue containing a few tiny blood vessels and nerves. As a result of chronic inflammation involving the pleura and extrapleural tissues, this layer becomes thickened and well defined. On the degree to which this layer and the parietal pleura retain their capacity to stretch, depends the structure of adhesions as found in cases of artificial pneumothorax. In early disease involving the pleura, before the development of fibrous tissue, upon the induction of pneumothorax these layers stretch and form the greater part of the adhesion. It is in this type of case that are seen the simpler bands and cords. As the inflammatory process becomes more chronic in character, with resulting formation of fibrous tissue, the capacity to stretch of the parietal pleura and extrapleural tissues becomes less, until finally the two layers of the pleura, together with the extrapleural tissues, become welded into a dense layer, in which no capacity to stretch remains. In such a case, when pneumothorax is induced the portion of the lung subjacent to the affected area remains firmly attached to the ribs and intercostal muscles. Between the early case, in which the parietal pleura and extrapleural tissues retain their full capacity to stretch, and the long-standing case, in which this is entirely lost, every intermediate stage is found. Several stages may be found in the one adhesion. Examination of the parietal attachment of an adhesion may reveal a central portion, where the lung is densely adherent to the parietes; immediately adjacent to this, the parietal pleura and extrapleural tissues may have stretched to a limited degree, while the free edge of the adhesion may be formed of stretched parietal pleura and extrapleural tissues, in which no lung tissue is present.

It will be seen that many "adhesions", as seen in radiographs in cases of artificial pneumothorax, are in reality portions of lung attached firmly to the chest wall. A type of "adhesion" seen fairly commonly is that in which a portion of lung, perhaps containing a cavity, is drawn out into the shape of a cone, tapering to a narrow attachment to the chest wall; in this type, a prolongation of a cavity may extend almost to the chest wall. In some cases a portion of lung is drawn out to form a tongue-shaped mass, which is attached to the chest wall along a margin which may be as much as three or four inches in extent. From the mode of formation of pleural adhesions it can be appreciated that, except in the case of thin bands, cords and membranes which can be satisfactorily transilluminated, the danger of cutting into lung tissue during the freeing of adhesions must constantly be guarded against. Except in the case of the simple adhesions just mentioned, enucleation of the adhesion from the chest wall should be performed, the line of separation being external to the parietal pleura. The term "cutting" adhesions conveys a wrong impression of the technique which should in most cases be followed. I prefer to use the term "free" or "release" rather than "cut".

Technique.

The original two-cannula technique, introduced by Jacobaeus, with the use of the galvano-cautery, is probably still that most widely practised. However, during recent years there have been a number of advocates for the use of the high-frequency current, or electrosurgery, as it is usually called by American writers. Advantages claimed for electrosurgery are as follows.

1. The amount of tissue destruction on either side of the point of division of the adhesion is less than when the galvano-cautery is employed; when the latter technique is used, it is held that owing to the greater tissue destruction there is the possibility of bleeding from vessels incompletely coagulated, and later, of the separation of areas of necrosis which have not become organized, with consequent risk of spontaneous pneumothorax.

2. When electrosurgery is used, less heat is produced within the pleural cavity.

3. The duration of the operation is shortened by electrosurgery.

4. No smoke is produced when electrosurgery is employed.

Matson, who used the galvano-cautery in his earlier cases, later abandoned it in favour of electrosurgery and attributed the greater freedom from complications in his later cases to this change.

Electrosurgery was used by Chandler and is used by Moore, Drash, Newton, Cutler and others.

Supporters of the galvano-cautery technique emphasize the following points: (i) the simplicity and relative cheapness of the equipment; (ii) the greater difficulty of perfecting the operative technique when electrosurgery is used; (iii) the liability to muscular spasms when electrosurgery is used, particularly during surgical work in the extreme apex.

Advocates of the galvano-cautery include Brock, who in 1938 wrote from an experience of 442 operations, and Alexander, both surgeons having had experience of electrosurgery. Alexander[3] notes that Jacobaeus and Unverricht, both of whom used the galvano-cautery in their earlier cases, for a time used electrosurgery, but reverted to the use of the galvano-cautery.

A single cannula technique has been used by some surgeons. Electrosurgery is used, and both thoracoscope and high-frequency electrodes are introduced through a single cannula. This technique was used by Chandler and has been used in America by Cutler, O'Brien and others.

In my series the two-cannula technique with the galvano-cautery has been used throughout. As regards the value of electrosurgery, I have an open mind, since, so far, I have not had the opportunity of employing the latter.

Anæsthesia.

In my series local anæsthesia has been used, except in one case which will be mentioned. Preliminary premedication is employed, and after several methods had been tried,

the most satisfactory was considered to be a combination of "Nembutal" and "Omnopon". "Nembutal" (three grains) is given two hours before operation and "Omnopon" (two-thirds of a grain) one hour before. "Planocaine" (0·5%), to which are added three minims of adrenaline (one in 1,000) for each ounce of solution, is used for local infiltration, and frequently four ounces and sometimes six ounces have been used for a single patient without untoward effects. When necessary, the parietal insertion of the adhesion itself may be infiltrated by means of a long needle introduced through one cannula, although in the majority of cases this has not been necessary. In the case of one female patient, who begged to be rendered unconscious, "Avertin" was used, but was not satisfactory, owing to the fact that although she was unconscious, she became restless as soon as the parietal pleura was touched with the cautery. In this case the operation had to be abandoned.

Site of Punctures.

Various sites have been recommended as the most suitable for introduction of the cannulæ.

Alexander[2] recommends that, as the majority of adhesions are in the postero-lateral portion of the chest, the thoracoscope should, in such cases, usually be introduced through the anterior or antero-lateral thoracic wall, and the cautery in the mid-axillary or postero-lateral thoracic wall. Brock,[3] on the other hand, states that he has never to his memory used an anterior puncture, and he finds the thought distasteful. Brock introduces the thoracoscope posterior to the angle of the scapula in the sixth or seventh intercostal space. Alexander,[3] again, states that on the few occasions on which he has chosen the posterior position as used by Brock, it has given a relatively unsatisfactory view of the postero-lateral adhesions, and that the narrowness of the posterior intercostal spaces has interfered with free and painless movement of the instrument.

I have tried a variety of puncture sites, and generally I have found the anterior and posterior axillary lines the most suitable for introduction of the cannulæ. It is the adhesion in which the parietal attachment is in the extreme apex of the thorax that offers the greatest technical difficulty at operation, particularly if it is at all broad, or if little space only is present between lung and chest wall. On more than one occasion, in dealing with adhesions of this type, having made the first puncture posterior to the angle of the scapula, I have abandoned it in favour of a puncture in the posterior axillary line. In dealing with this adhesion, frequently I have found it more convenient to work with the thoracoscope introduced through the cannula in the posterior axillary line, and the cautery rod through the anterior cannula, which usually can be introduced at a higher level.

I do not think that painstaking attempts to map out the adhesions prior to operation, with the object of planning the precise puncture sites accordingly, are repaid. Frequently the adhesions prove to be very different from the pre-operative conception, and often adhesions, unsuspected prior to operation, are discovered through the thoracoscope. On the other hand, if the main adhesion appears to be below the level of the clavicle, the cannulæ should be introduced at a lower level than in the case of extreme apical adhesions.

Indications for Operation.

Although occasionally one sees patients in whom pneumothorax is prevented by adhesions from allowing complete relaxation of the lung, but is followed by closure of cavities and even by healing of the lesion, in the great majority of such cases the disease remains uncontrolled. Cavities not infrequently become smaller in the presence of incomplete pneumothorax, but rarely do they close completely, and so long as a residual cavity persists, there remains to the patient the potential danger of bronchogenic spread. Whilst all pleural adhesions do not necessarily prevent effective collapse, particularly in the case of basal adhesions, nevertheless any adhesion inserted over the site of a lesion must be prejudicial to healing. Even when no cavity is obvious, the continual tugging with each respiration over an area of active exudation is likely to prevent healing and even to cause spread of the process.

Brock,[3] writing in 1938, made the following statement:

> Most experienced workers now agree that even though cavities do not appear to be present in the lung that is held by adhesions, and although symptoms are absent or minimal, it is not safe to leave such a lung incompletely collapsed, if study of the earlier films show that the adhesions are controlling areas of what was active disease.

A further aspect of the incomplete pneumothorax is the question of complications. There is general agreement that the more serious complications of artificial pneumothorax therapy—namely, spontaneous pneumothorax, persistent effusion, empyema and obliterative pleuritis—are much more common in those cases in which the pneumothorax is complicated by adhesions, than when a technically satisfactory collapse is present.

I have been interested to compare the results obtained in my earlier cases of pneumothorax therapy with those of the more recent group, in which practically all patients with adhesions have been given the opportunity of having thoracoscopic examination and when possible pneumonolysis. Both from the point of view of absence of complications, and from that of control of the pulmonary lesion, the results in the latter group are much the better; this, of course, has been noted by numerous observers in Europe and America. However, it strengthens me in the view that rarely should thoracoscopy be withheld from the patient in whose case an artificial pneumothorax worth continuing at all is rendered ineffective by adhesions.

Suitability for Operation.

Alexander[2] gives as his experience that relatively few patients having an artificial pneumothorax have adhesions suitable for pneumonolysis, and he holds the view that less than 25% of patients having this form of collapse therapy should be submitted to operation. Edwards and Lynn[6] are of the opinion that with the aid of pneumonolysis complete collapse can be obtained in over 30% of all cases of artificial pneumothorax.

The suitability of any individual patient for operation rests primarily on the radiograph. In a few cases the film indicates extensive pleural symphysis, which would obviously render any attempt at operation abortive. In a few cases also, the presence of simple cords can be determined with reasonable certainty. Generally the precise nature and extent of the adhesions cannot be determined from the radiograph alone, although usually it is possible to form a reasonably accurate estimate of their general complexity, and to reach a conclusion as to whether operation is likely to be difficult. In my experience, when I have performed thoracoscopy on patients about whom I had formed the opinion before operation that pneumonolysis was not possible, I have seldom erred; on the other hand, I have not infrequently found, in cases in which I had hoped before thoracoscopy that a complete operation might be performed, either that pneumonolysis could not be performed, or that it could be performed only in part.

Fluoroscopic examination is a valuable aid in the assessment of adhesions, and on two or three occasions oblique films have helped me materially.

Some authors believe that considerable value attaches to stereoscopic films. Newton[10] expresses the view that stereoscopic films are obligatory, but later admits that too much dependence cannot be placed on them, and that the final decision as to operability can be made only after thoracoscopic examination. Brock[3] has used stereoscopic films rarely and "only when they have been supplied". Alexander,[3] although advising stereoscopic films, believes that the final decision rests on the result of the thoracoscopic examination. With the view that in the great majority of cases the decision to undertake pneumonolysis can be made only after visualization of the adhesions through the thoracoscope, I am in agreement.

At operation it is not infrequently found that what may appear on the X-ray film as a simple cord is the

edge of a broad membrane. Three cords on the radiograph may prove to be the three edges of an adhesion which is T-shaped on cross-section. An otherwise simple adhesion may be found at operation to be attached to a vital structure, so that operation is rendered impossible; in one of my cases an otherwise readily operable adhesion was attached to the subclavian vein; in one case a band one inch in width was attached for the whole of its extent over the subclavian artery, and in another case close proximity to the latter artery would have rendered any attempt to free the adhesions unduly hazardous. Frequently at thoracoscopy adhesions are found whose presence was not suspected prior to operation. One type of adhesion which should be left untouched when found is the broad membrane holding up a large peripheral cavity. In this type of adhesion, the peripheral wall of the cavity probably receives the greater portion of its blood supply through the adhesion. To sever the adhesion is likely to lead to sloughing, with consequent development of spontaneous pneumothorax.

The decision whether to operate in cases of extensive adhesions sometimes requires considerable judgement. In such cases pulmonary disease is often extensive and complications are more likely to occur. However, the alternative to successful pneumonolysis is often extensive thoracoplasty, and my present inclination is to attempt pneumonolysis when a reasonable prospect of success appears to be present.

Duration of Pneumothorax before Pneumonolysis.

It has been advised in the past that a sufficient period should be allowed for the adhesions to stretch before pneumonolysis is attempted. Alexander[2] believes that pneumonolysis should not be employed in the average case until three to six months after the induction of pneumothorax. However, with the passage of time fibrous tissue formation occurs in the adhesion, which becomes shorter, tougher and broader; this renders operation more difficult. The attempt to stretch adhesions by the use of positive pressure is highly dangerous and is to be condemned; tearing of the adhesion at the visceral end may occur, with consequent development of spontaneous pneumothorax. Finally, if operation is deferred unnecessarily, time is being wasted, since in the estimation of the period in which pneumothorax should be continued in any patient, the date at which the pneumothorax is rendered effective must be considered as the date of commencement.

Newton[33] advises operation as soon as the maximum collapse obtainable without the use of high pressures has been reached, and if a sufficient space exists, and if the adhesions seem operable. Thompson and Greenberg[29] advocate operation about three weeks after induction of pneumothorax.

My own view is that operation should be undertaken as soon as an adequate space exists. In several cases I have operated in under four weeks from the induction of pneumothorax, and in one case successful pneumonolysis was carried out on the fourteenth day after the initiation of pneumothorax. In the case of patients with more complex adhesions, a rather longer waiting period is sometimes necessary to gain an adequate working space, but forcing by positive pressures should never be resorted to.

The Present Series.

Clinical Material.

In the series forming the basis of this study, 143 operations were performed on 115 patients. In 65 cases (56·5%), complete pneumonolysis was carried out; in 35 cases (30·4%), incomplete pneumonolysis was carried out; in 15 patients (13%), a thoracoscopic inspection only was made. By complete pneumonolysis is meant the procedure by which all adhesions preventing effective collapse of the lung were freed. By incomplete pneumonolysis is meant the procedure by which, in the case of multiple adhesions, some, but not all, of the restraining adhesions were freed, or in the case of single large adhesions, a significant portion was freed.

Table I shows comparable figures for representative series collected from the literature.

Table I.

Author.	Total Number of Patients.	Complete Pneumonolysis.	Incomplete Pneumonolysis.	Pneumonolysis Not Performed.
Anderson and Alexander	111	41 (37·0%)	46 (41·4%)	24 (21·6%)
Edwards and Lynn ..	235	86 (34·0%)	140 (55·0%)	29 (11·0%)
Carp and Kornblith ..	100	32 (32·0%)	43 (43·0%)	25 (25·0%)
Matson ..	249	154 (61·9%)	19 (7·6%)	76 (30·5%)

Of the 65 cases in which complete pneumonolysis was performed, in 59 satisfactory relaxation of the lung was obtained as a result. Of the 35 cases in which incomplete pneumonolysis was performed, in 11 satisfactory relaxation of the lung was obtained.

Comparison of the results obtained by complete and incomplete pneumonolysis indicates the importance of freeing all significant adhesions when possible; nevertheless, the fact that in 11 of the 35 cases in which incomplete pneumonolysis only was performed, satisfactory relaxation was obtained, indicates that even the incomplete operation may often be of value.

In a number of cases in which pneumonolysis was not performed, or in which only partial freeing of the lung was possible, phrenic nerve interruption was subsequently performed and the pneumothorax was continued; in these cases there seemed to be reasonable prospect of control of the lesion.

Type of Adhesions.

I have arbitrarily divided the adhesions seen into four grades according to their number and complexity, as follows: grade I, not extensive (for example, one or two simple cords or narrow bands, or one rather wider band easy of access); grade II, moderately extensive (for example, two or three bands about one inch wide, or one fairly wide band; in Case XLIV there were one thick adhesion one and a half to two inches wide, one narrow band and one short membrane about one inch wide); grade III, extensive (for example, in Case CIII ten bands of varying widths, thicknesses and lengths were present); grade IV, very extensive (most of these patients had pleural symphysis over wide areas, and in most cases operation was impossible, although in a few cases partial pneumonolysis was possible).

In accordance with this classification, 24 patients had adhesions belonging to grade I; 36 patients had adhesions belonging to grade II; 36 patients had adhesions belonging to grade III; 16 patients had adhesions belonging to grade IV; in the case of three referred patients, in which the lung contours suggested adhesions, thoracoscopic examination was performed, but no adhesions were seen.

Contralateral Disease.

In 57 cases active disease was present in the contralateral lung at the time of operation, and in three cases apparently inactive disease was present. In two cases a "doubtful" area was present on the radiograph. In seven cases contralateral artificial pneumothorax was being maintained at the time of operation.

Duration of Pneumothorax Prior to Operation.

The shortest period from the time of induction of pneumothorax to operation was fourteen days and the longest three years. In 32 cases pneumothorax had been present for less than three months, in 39 cases from three to six months, in 34 cases from six to twelve months, in six cases from twelve to eighteen months, and in four patients for over eighteen months.

Age of Patients.

The youngest patient in the series was fifteen years old and the oldest forty-six years. The youngest patient in Chandler's[5] series was a child, aged seven years, and the oldest patient was aged fifty-four years.

Final Assessment.

Although in a number of cases too short a time has elapsed to enable a final assessment to be made, an attempt has been made to divide the results into "successful" and "unsuccessful" in accordance with the ultimate benefit received by the patient from the point of view of control of the lung lesion. In some cases, for example, although complete relaxation of the lung was obtained, cavities have not closed. In these cases, although the operation was technically a success, it was a failure from the point of view of the patient. Also, in a few cases in which complete relaxation of the lung was effected, serious complications occurred. These complications will be considered in a later section. On present indications, of the 115 cases in which the operation was performed, it is considered that in 58 the operation was a success, and that in 45 (which includes 15 in which pneumonolysis was not attempted) it was unsuccessful; in 12 cases it is considered that too short a period has elapsed to allow a final assessment to be made.

Of the 100 cases in which pneumonolysis, complete or incomplete, was performed, in 58 the operation appears to have been successful according to the above standards, in 30 it was unsuccessful, and in 12 the result is still in doubt. With regard to patients not in my direct care, the assessment has in all cases been made after consultation with the referring physician.

Of the 143 operations, 110 were performed at the Canterbury District Hospital and 33 at the Royal North Shore Hospital.

Complications.

Complications of pneumonolysis include hæmorrhage, persistent non-purulent effusion, spontaneous pneumothorax, empyema, and contralateral spread of the disease. A late sequel may be obliterative pleuritis. Less important complications seen include transient serous effusions, surgical emphysema, post-operative vomiting, injury to nerves, air embolism, pleuro-cutaneous fistula, and dyspnœa during operation.

Hæmorrhage.

Hæmorrhage may occur from the divided adhesion, from injury to a great vessel such as the subclavian artery, or rarely, from injury to an intercostal artery by the trocar.

In order to minimize the risk of injury to the lung, adhesions should be divided flush with the chest wall, or preferably in the majority of cases, enucleated from the chest wall. This increases the risk of cutting into an intercostal artery or one of its branches. However, with adequate experience and careful attention to technique, I believe that hæmorrhage from this cause should rarely if ever occur. In my series there were three cases of severe hæmorrhage. These occurred within a short period, after some thirty patients had been operated upon without incident.

Hæmorrhage has been reported to occur through an opening into one of the great vessels. Alexander notes that Gulbring reported the death on the operating table of a patient whose subclavian artery had been cut. Careful appraisal of the adhesion to be freed and identification of the great vessels in the apical region before cauterization is commenced, should prevent such a catastrophe.

Rarely, troublesome hæmorrhage occurs from the trocar puncture. In one of my cases, steady although not severe hæmorrhage was still present at the termination of an operation which had lasted about forty minutes. The hæmorrhage appeared to be from just inside the internal opening of the puncture. It is possible that this hæmorrhage would have stopped spontaneously; however, a third puncture was made, and the cautery was introduced through this; the tip was then carefully inserted into the bleeding opening, and the area from which the hæmorrhage appeared to be coming was coagulated. This manœuvre was successful in completely stopping the hæmorrhage. Blood vessels of any magnitude are seldom present in the adhesion itself. In one of my later cases, however, tortuous vessels about one-eighth of an inch in diameter were present on the surface of a band about one inch wide. I was able to coagulate these before division, and the adhesion was freed without incident.

Table II shows the incidence of hæmorrhage in a number of reported series. In an attempt to compare different series, not infrequently difficulty is experienced, owing to the fact that various authors interpret incidents differently. For example, Matson[15] in one paper refers to a hæmorrhage involving a loss of two litres of blood as "moderate"; other authors might class a hæmorrhage of this order as serious. Drash,[5] in reporting a series, notes one "serious" and two "moderate" hæmorrhages; nevertheless, in two of these cases open operation was necessary to control bleeding.

TABLE II.

Author.	Number of Patients.	Extent of Hæmorrhage.	
		Severe.	Small.
Anderson and Alexander	111	0	0
Brock	361	3	
Carp and Kornblith	100	2 (1 death on the table)	
Drash	249	1	2 (moderate)
Edwards and Lynn	255	1	6
Goorwitch (4 surgeons)	365	12 (1,000 cubic centimetres or over)	24 (500 cubic centimetres or less)
Jacobaeus	600–700	2	
Matson	249	3	
Moore (38 surgeons)	2,043	15 (1 fatal)	
Newton	166	0	
Unverricht	950	0	
Viswanathan	56	2	

Pleural Effusion.

Alexander[3] is of the opinion that a small amount of serous exudate confined to the costo-phrenic sinus probably occurs in the majority of cases. Brock[3] states that a slight amount of fluid after operation is inevitable, owing to the trauma inflicted and to oozing from the site of puncture. Smoke has been cited as a cause of serous effusion when the galvano-cautery is used. Smoke has, however, seldom been of any consequence in my cases, and I believe it is unlikely to be a causative factor in fluid formation. Fluid of the type just mentioned is absorbed within a week or so, and is of no importance.

Of the 115 patients submitted to operation, in 55 no radiological evidence of fluid was seen, and in 43 a small transient effusion ranging from an amount just visible to an amount reaching the level of the dome of the diaphragm was seen; thus in 98 cases no effusion of any significance occurred. In four cases a persistently recurring serous effusion was present.

Three patients suffered hæmothorax. Of these, one later developed empyema, and this case will be considered more fully in a later section. In the other two, both of whom had advanced bilateral disease, in spite of repeated aspiration the hæmothorax rapidly became loculated and later organized, although empyema did not follow in either case. One patient died two months after operation. The other patient lived for six months; this, in the opinion of his own physician, was probably little less than his expectation of life, had no operation been performed.

Seven patients, including the one already mentioned, developed empyema, and these cases will be considered in a later section.

In two cases a serous effusion was present at the time of operation; in one of these thoracoscopy only was carried out. In two cases, empyema was present at the time of operation; in neither of these cases was pneumonolysis attempted. Thus, of 111 patients who had no fluid in the pleural cavity at the time of operation, in 98 (88%) no effusion of clinical importance occurred. In the case of persistent effusions, it is probable that most, if not all, are tuberculous in origin.

In Table III an attempt is made to compare the incidence of serous effusion in a few reported series. Difficulty is experienced in appreciating the significance to be attached to terms such as "very small", "moderate", *et cetera*, as used by different writers.

Empyemata are discussed in the next section, and are not included in this table.

TABLE III.

Author.	Number of Patients.	No Effusion.	Extent of Effusion.	
			Transient or Very Small.	Moderate, Great or Persistent.
Brock	361	232 (64·5%)	81 (22·5%)	37 (10·2%)
Chandler	157		8 (5·0%)	28 (18·0%)
Edwards and Lynn	237[1]		20 (8·4%)	26 (10·9%)
Goorwitch (4 surgeons)	365		48 (13·0%)	49 (13·0%)
Newton	166	(83·2%)	(12·3%)	(4·5%)

[1] Number of operations (author's own figures quoted).

Empyema.

Empyema following pneumonolysis may be of tuberculous origin or due to pyogenic infection, or a mixed infection may be present. Pyogenic infection, I believe, only rarely follows infection introduced into the pleural cavity at operation. Pyogenic infection, when it occurs, usually follows spontaneous pneumothorax. Occasionally tuberculous empyema treated by repeated aspiration may become infected. It should be a *sine qua non* that all aspirations must be carried out with the strictest aseptic ritual.

A purulent exudate may follow injury to the lung at operation, or a small area of necrosis, which has failed to become organized, may separate from the surface of the lung from one to three weeks after pneumonolysis. In some cases a persistently recurring serous effusion may gradually become purulent after many weeks.

Drash[13] has discussed the development of empyema following pneumonolysis. He cites the work of Joannides,[14] who was able to demonstrate the presence of very small tubercles on the surface of the pleura. These tubercles are very likely to be dislodged—for example, by being continually washed by an effusion. Fibrin plaques on the pleural surface often contain tubercle bacilli. If such tubercles or plaques are present close to the insertion of an adhesion, it is not difficult to imagine that bacilli may be set free during the manipulations incident to the freeing of the adhesion.

Again, tubercle bacilli may become sealed between the visceral and parietal pleura, where the two layers have become fused at the site of chronic disease. A cross-section through this area may reveal a narrow, greyish zone of fused tubercles. In the freeing of an adhesion, an opening may be made into this zone and bacilli set free. This is a strong argument in favour of enucleation of all adhesions, except those thin bands and cords which are formed of stretched parietal pleura and extrapleural tissues alone. A further factor to consider is that lymphatics coursing through an adhesion may contain bacilli, which, after division of the adhesion, may be set free from some of the incompletely sealed channels.

The presence of tubercles on the pleura when seen through the thoracoscope is an important danger signal to the surgeon, and considerable caution should be exercised before a decision is made to proceed with pneumonolysis in their presence. Unverricht is stated by Alexander[3] to have found that there is great danger of the development of tuberculous empyema if tubercles in an injected pleura are present, even at a distance from the divided adhesion. In Anderson and Alexander's[1] series, tubercles were present in "at least 7" of their 111 patients. In two only of the seven cases was pneumonolysis performed; in one case tuberculous empyema occurred, and in the other no post-operative exudate followed. In my series of 115 patients, tubercles were seen on the pleura in six cases. In three of these, thoracoscopic examination only was carried out. In one case tubercles were seen at the base of one adhesion, which fortunately did not appear to be causing tension on the lung; this adhesion was not interfered with, but a number of other adhesions were freed, and this patient had an uneventful post-operative course. In one case a considerable number of adhesions were divided, although for technical reasons complete pneumonolysis was not possible; a small transient effusion occurred. In the sixth case, in which the lung was completely freed by the division of ten adhesions of varying widths and lengths, a few tubercles were seen on the parietal pleura, but not very near the insertion of any of the adhesions. No effusion occurred in this case.

In my series empyema has occurred in seven cases (6%). In five cases tubercle bacilli were recovered from the fluid, and in two cases no organisms could be recovered.

Bacteriological examination has included examination by direct smear and attempted culture for tubercle bacilli and pyogenic organisms. In the cases in which no organism was recovered, repeated investigations have been carried out. These cases have been presumed to be of tuberculous origin.

The periods following operation at which empyema has been noted have been as follows: two weeks, one case; three weeks, two cases; seven weeks, one case; eight weeks, one case; sixteen weeks, two cases.

A short history of each patient who developed empyema follows.

CASE XXIX.—The patient was a female, aged twenty-six years. Artificial pneumothorax had been induced elsewhere some fifteen months before she reported to the Royal North Shore Hospital Pulmonary Clinic, where she came under the care of Dr. Bruce White. She then had extensive disease in the left lung, with a large uncontrolled cavity held up by adhesions. Active advancing disease with cavitation was present in the upper half of the right lung. It was decided that her only chance was to render the pneumothorax on the left side effective by pneumonolysis, and then to institute collapse therapy on the right side. Adhesions belonging to grade II (*vide supra*) were freed without any difficulty. A persistent effusion followed. After eight weeks the effusion had become purulent and tubercle bacilli were recovered from the fluid.

This patient died ten months after operation.

It is not considered that in this case death was in any way hastened by operation. The patient obviously was a "forlorn hope" from the time she first reported to the Royal North Shore Hospital.

CASE XXX.—The patient was a female, aged eighteen years, in whom extensive unilateral disease with multiple cavitation was present. Artificial pneumothorax was induced, and later pneumonolysis was carried out in two stages, the lung being completely freed at the second operation. This was one of the cases noted above in which hæmothorax developed. All blood was removed from the pleural cavity, but a persistent effusion followed. This was first found to be purulent sixteen weeks after operation. In spite of repeated examination no organism has been recovered from the fluid. This patient's condition nine months after operation is as follows: Her general condition is excellent, two stone in weight having been added during the past five months. The lung is completely collapsed, with complete control of cavities, although commencing obliterative pleuritis has been evident for about three months. Frequent aspirations are still necessary.

It is likely that this patient will later require thoracoplasty, and that there is a fairly good ultimate prospect of control of her disease.

CASE XXXVI.—The patient was a male, aged twenty-seven years. Extensive disease with multiple cavitation was present. Artificial pneumothorax was ineffective owing to adhesions. Widespread calcification was present in the contralateral lung. Extensive pneumonolysis was completed in two stages. Two weeks after the second operation spontaneous pneumothorax occurred. This was accompanied by a violent pleural reaction and the development of a purulent effusion from which tubercle bacilli were recovered. The acute stage settled down during the course of a few weeks. Nine months after operation his general condition is good, but he still has a rather large effusion.

It is likely that in this case also thoracoplasty will be necessary.

CASE XXXIX.—The patient was a male, aged twenty-seven years, who had a moderate amount of disease in the upper half of the left lung. Pneumothorax was ineffective owing to adhesions. In the contralateral lung a small amount of disease of chronic type was present. Incomplete pneumonolysis was performed, and it was intended that the operation should be completed later on. The day after operation, however, spontaneous pneumothorax was evident. This was apparently due to injury to the lung at operation. An effusion followed, which after three weeks became purulent. No organism of any kind was recovered

from this fluid. The acute stage quickly settled down. The patient's condition nine months after operation is as follows: His general condition is excellent. His lesion seems to be under control. Fluid which six months after operation was noted to be no longer purulent in character has now ceased to form. Commencing obliterative pleuritis is present, although so far pneumothorax is being continued.

CASE XL.—The patient was a male, aged forty-five years. Fairly extensive disease with cavitation was present, uncontrolled by pneumothorax because of adhesions. Infiltration was present in the contralateral lung. Moderately difficult pneumonolysis was completed in one stage. An effusion followed, which after sixteen weeks had become seropurulent. Tubercle bacilli were recovered from the fluid. The patient's present condition, nine months after operation, is as follows: The cavity is not obvious on X-ray examination, and tubercle bacilli were not found at the most recent sputum examination. Aspiration still needs to be performed about every six weeks, but his physician reports that the fluid is becoming thinner in character.

CASE LXXII.—The patient was a female, aged twenty-three years. Extensive disease with cavitation was present, uncontrolled by pneumothorax because of numerous adhesions. Active disease with cavitation was also present in the contralateral apical and subapical regions. Extensive adhesions were found on thoracoscopic examination, and a considerable degree of freeing of the lung was effected. A small effusion followed operation, but this had been almost completely absorbed three weeks later, when spontaneous pneumothorax suddenly developed. A purulent effusion now followed, from which tubercle bacilli were recovered. The acute stage settled down in about two weeks. Her condition, six months after operation, is that she still has a small purulent effusion. The disease in the contralateral lung, however, has extended and the ultimate outlook seems hopeless on present indications.

CASE LXXXIV.—This case was of particular interest. A rather easy operation was performed, the adhesion being a single band overlying an uncontrolled cavity. A radiograph taken eleven days after operation revealed complete relaxation of the lung with no evidence of effusion. However, two ring-like shadows were obvious near the periphery of the collapsed lung, which had not been present prior to operation. The following day spontaneous pneumothorax occurred, and a subsequent radiograph showed that these shadows had disappeared. It was concluded that the shadows were due to emphysematous bullæ, presumably caused by partial blockage of a small bronchus, and that the spontaneous pneumothorax was caused by their rupture. An effusion followed the lung rupture, and was noted to be purulent seven weeks after operation, or just over five weeks after the development of spontaneous pneumothorax. Tubercle bacilli were recovered from the fluid. This patient's condition five months after operation is as follows: Her general condition is good. Complete relaxation of the lung is present. Fluid formation is still in evidence.

In all these cases treatment has been by repeated aspiration. In Case LXXII "Soluseptasiné" was introduced into the pleural cavity on several occasions after aspiration; this drug was also used in Case XXX after some of the later aspirations. Whether the use of this drug was a factor in preventing the development of a mixed infection empyema in Case LXXII, I do not know. At the time of writing, one of the seven patients (Case XXIX) is dead, and another (Case LXXII) is considered to have a hopeless prognosis. In neither of these cases is it considered that the development of empyema following operation will have materially contributed to the fatal termination, as death in Case XXIX was due, and on present indications death in Case LXXII will be due, to spreading lung disease.

Any of the other five patients may ultimately require thoracoplasty, although with regard to the patients in Case XL and Case LXXXIV and perhaps also in Case XXXIX, there appears to be a reasonable chance of ultimate recovery without resource to this procedure.

In Case XXX the hæmothorax was probably a factor in the development of empyema. In Case XXXIX the lung was probably injured at operation. In Case XXXVI and Case LXXII probably a small area of necrosis separated, with resulting spontaneous pneumothorax. Case LXXXIV has already been discussed.

With regard to Case XXIX and Case XLIX, possibly one of the other factors mentioned above in the general discussion on empyema may have played a part.

With regard to the fact that no case of mixed infection empyema has occurred, I do not know whether the routine use of a full course of sulphathiazole or in some cases sulphapyridine immediately after operation in cases of extensive pneumonolysis has been a factor.

Table IV indicates the incidence of empyema in representative recorded series.

TABLE IV.

Author.	Number of Patients.	Type of Empyema.		
		Pure Tuberculosis.	Pyogenic Infection.	Total.
Anderson and Alexander	111	4 (3·6%)	2 (1·8%)	6 (5·4%)
Brock	361	5 (1·4%)	5 (1·4%)	10 (2·8%)
Chandler—1st series	89	3	4	7 (7·8%)
Chandler—2nd series	68	1	0	1 (1·4%)
Matson	249	41		41 (16·5%)
Goorwitch (4 surgeons)	365			31 (8·9%)
Edwards and Lynn	237[1]	32 (13·5%)		32 (13·5%)
Drash	249	6		6 (2·6%)

[1] Operations.

Matson[(93)] in 1934 published an interesting dissection of his 249 cases. His first group included 136 cases in which the Jacobaeus technique with the use of galvano-cautery was used; in the second group of 35 cases he used electrosurgery, with what he describes as an obsolete high-frequency unit; in the final group of 78 cases he used electrosurgery with a Bovie high-frequency unit. Table V shows Matson's dissection. Matson attributes the progressive improvement in his results to the different methods used. However, it may not unreasonably be suggested that his greater experience of pneumonolysis, apart from the method used, may have played a part.

TABLE V.
(Adapted from Matson.[(93)])

	Jacobaeus's Method.		Author's Method.			
	Galvanocautery, 136 cases.		Unnamed high frequency unit, 35 cases.		Bovie high frequency unit, 78 cases.	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Purulent exudate	36	26·4	4	11·4	2	2·5

Spontaneous Pneumothorax.

Spontaneous pneumothorax has occurred five times. Four of the cases have been considered in the discussion of the incidence of empyema.

The other patient (Case XXVIII) had several rather difficult adhesions which I had proposed to free in two stages. The first stage was performed and convalescence was uneventful until eighteen days after operation, when a refill was given. The night following this refill, spontaneous pneumothorax occurred. The pneumothorax was of the valvular type, and death resulted.

Rupture in this case was considered to be due to tearing of an incompletely divided adhesion, as a consequence of the refill, and not as a direct complication of the operation—although, of course, it occurred indirectly as a result of the latter.

Table VI shows the incidence of spontaneous pneumothorax in a few recorded series.

TABLE VI.

Author.	Number of Cases.	Number of Cases of Spontaneous Pneumothorax.
Edwards and Lynn	260	6 (2·3%)
Goorwitch (4 surgeons)	373	21 (6·0%)
Newton	249	5 (2·0%)

Obliterative Pleuritis.

Alexander[3] believes that obliterative pleuritis occurs more frequently after pneumonolysis, than it does in patients undergoing artificial pneumothorax therapy who have not been subjected to this operation.

In my series this complication has developed subsequent to operation in five cases. In two further cases, commencing obliterative pleuritis was present prior to operation.

Of the five cases in which the condition commenced subsequent to operation, in one case thoracoscopic examination only was carried out, in two cases the condition developed as a consequence of empyema (these cases have already been discussed), in one case a persistently recurring serous effusion was present, and in the fifth case the condition appeared rather unexpectedly a few weeks after operation. Of the five cases, the pneumothorax has been lost or appears likely to be lost in three. In both the other cases, pneumothorax is being continued twenty months and eight months respectively following operation.

In the two cases in which pre-operative commencing obliterative pleuritis was present, the pneumothorax has been lost or is likely to be lost.

It is questionable whether pneumonolysis should be undertaken when commencing obliterative pleuritis is in evidence.

Other Complications.

Surgical Emphysema.—Surgical emphysema, in some degree, has been of frequent occurrence in my cases. Tightly applied strapping over a built-up pad of gauze has lessened the degree of emphysema, but except in a few cases has not been completely effective in preventing the escape of air into the tissues. In a few cases in which cough has been severe, extensive emphysema has occurred—in two cases extending upwards to the face and into the loose tissues around the eyes, and in one case extending downwards as far as the scrotum. In no case has the emphysema been more than a temporary annoyance, and in no case has the pneumothorax been lost. Anderson and Alexander[1] report losing the pneumothorax once in their 111 cases through post-operative loss of air into the tissues; of Moore's[17] collected series of 2,043 cases, in six cases the pneumothorax was lost and of Drash's[9] 249 cases, in one the pneumothorax was lost.

Post-Operative Vomiting.—Post-operative vomiting has occurred in a number of cases. The possibility that the premedication might have had some bearing was considered—morphine and hyoscine were being used at the time—and in the case of two of temperamentally suitable patients, premedication was dispensed with; however, in one of these cases moderately severe post-operative vomiting occurred. This complication has been noted by Brock,[2] who considers it due to manipulation of the pleura and subpleural tissues at operation.

Dyspnœa during Operation.—Dyspnœa during operation was complained of by two patients, in one of whom contralateral pneumothorax was being maintained at the time of operation. In both cases it was possible to complete the operation. Brock[2] reports that in three of five cases he had to stop the operation, and in one case he was compelled to abandon the operation completely, because of this complication.

Injury to Nerves.—Two patients complained of numbness of the arm and forearm. This passed off, in one case after a few days, and in the other after three or four weeks. In one case, while an adhesion was being enucleated from the chest wall, the second intercostal nerve was seen and recognized. In this case a little numbness occurred in the upper part of the arm in the distribution of the second dorsal nerve, and tenderness on pressure could be elicited in the second intercostal space anteriorly. This tenderness gradually passed off. In a case in which an extensive "peeling off" of the apex from the posterior gutter of the thorax was carried out, Horner's syndrome appeared after operation. This gradually passed off over a period of several months. Alexander[3] notes that in one of Saugman's cases, paralysis of one-half of the diaphragm followed division of an adhesion in the medial part of the chest.

Summary of Serious Complications.

The following is a summary of the serious complications.

Three patients had severe hæmorrhage. Seven patients, including one of three who suffered severe hæmorrhage, developed empyema; in five cases the empyema was tuberculous and in two cases it was presumed to be tuberculous. In four of these seven cases the empyema was preceded by spontaneous pneumothorax.

As well as the four patients just mentioned, one other patient suffered from spontaneous pneumothorax. Thus, of the 115 patients submitted to operation, which included 100 in whom pneumonolysis was carried out, ten patients suffered severe complications. Eight of these ten patients were included in the first fifty patients submitted to pneumonolysis, and two were among the second fifty.

In two cases in which obliterative pleuritis had commenced prior to operation, the process advanced after operation. In five other cases, including two already mentioned above, in which the condition developed after empyema, obliterative pleuritis became evident at a variable period subsequent to operation. In one case thoracoscopy only was carried out, and the pneumothorax is still being maintained twenty months after operation.

Thus, of the 115 cases, in thirteen immediate post-operative complications or late sequelæ of a serious or troublesome character developed.

Among patients who underwent thoracoscopic examination alone, one patient, already mentioned, later developed obliterative pleuritis, which may or may not have been related to the operation. No other complications, major or minor, occurred in this group.

DISCUSSION.

From the accumulated experience of many clinics in Europe and America, particularly during the past ten to fifteen years, the value of closed internal pneumonolysis has been abundantly proven. With the aid of pneumonolysis, a useless and dangerous pneumothorax may frequently be rendered effective, with resultant satisfactory relaxation of the lung, and in many cases closure of cavities and ultimate control of the lesion. Frequently the patient is saved the need of undergoing an extensive plastic operation, which might otherwise be necessary to preserve life; in cases of active contralateral disease, successful pneumonolysis may offer the only chance of survival remaining to the patient.

The operation itself is one never to be regarded lightly by the surgeon. A complete knowledge of the pathology of pulmonary tuberculosis is essential, and particularly, the structure and mode of formation of pleural adhesions must be fully understood, if a requisite technique is to be acquired. Alexander[3] himself, having a wholesome respect for the potential difficulties of the operation, takes to task a surgeon who said that "the technique of cauterization of adhesions by the Jacobaeus-Unverricht method is simple and free from danger". Alexander's comment is that neither Jacobaeus nor Unverricht held that view. The technical difficulties in the case of the more complex adhesions may be very great indeed. Nevertheless, if the operator is experienced, the incidence of serious complications should not be high, and in the case of the more simple adhesions, should be relatively rare. Of the sixty patients in my series who had adhesions of the order included in grades I and II above, only one patient (Case LXXXIV, already discussed in the section on empyema) suffered any serious complication. With regard to thoracoscopic examination alone, the risk of complication should be very small indeed.

SUMMARY.

The procedure of closed intrapleural pneumonolysis has been discussed.

The results in a series of patients submitted to operation are reported and the post-operative complications are reviewed.

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IRRITATION PRODUCED BY THE PROCESSION CATERPILLAR (OCHROGASTER CONTRARIA).

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To the entomologist, the procession caterpillar, the larva of a moth, *Ochrogaster contraria*, belonging to the family Notodontidæ, is well known, and references to its form, life and activities are readily obtainable in works of natural history and even in a few popular magazines. The irritation produced by the hairs is known alike to the aborigines and to the inhabitants of certain localities, where the silken bags which it forms are conspicuous objects. Referring to the caterpillar under the name of "Teara", quoted by Cleland, Spencer and Gillen ("Across Australia", Volume I, page 70) write as follows:

> The same feature was noted in regard to a peculiar bag made by the caterpillar of a moth (probably belonging to the genus Teara). The bag is usually very irregular in shape and may measure two feet in length and contain as many as a hundred caterpillars. Presumably it is the joint production of a large number of the latter whose excrement and hairs fill it with a material which produces a very severe irritation if it happens to touch the skin. The natives are very careful to avoid it, believing that it could blind anyone on whose face it might chance to fall. In fact serious results are known to have followed the tumbling down of a nest on to a white man sleeping under the gum tree from which it unfortunately fell while he was there. It is most usually found on the swamp gums and it may be seen in hundreds, but it is also met with on acacias and cassias. On one acacia we counted no fewer than 57 bags of various sizes.

That the medical literature refers to the caterpillar in the briefest of terms is confirmed in a letter from Professor Harvey Sutton, of the School of Public Health and Tropical Medicine, who reports that the school's entomologist writes as follows:

> I have not seen any references to the above. In any case a good cause would be served with some up-to-date information on any or all of these cases of dermatitis. Too little is known in Australia of such things.

Hence the following notes are worth putting on record.

A series of cases of stings by *Ochrogaster contraria* occurred recently in a northern area during the winter season. The victims were all servicemen living under bivouac conditions on the fringe of an area of jungle. The sign common to all cases was an irritative dermatitis where the hairs of the caterpillar had come into contact with the skin. This took the form of an irregularly diffuse erythematous rash accompanied by intense itching and distributed mainly on the volar surfaces of the upper limbs, on the abdomen and on the chest, but found elsewhere on the body (flexures included) with less severity. In well established cases a low-grade urticarial condition of the skin, which took the form of patchy erythema, was noticed between lesions. Of a series of ten patients studied, two developed coincident digestive upsets with general malaise and two showed pronounced urticarial reactions accompanied by œdema of the face.

Four patients came from the same tent, and a nest of caterpillars was found in an overhanging tree, on the trunk of which silken strands could be traced from the nest towards the tent and elsewhere. With treatment most lesions cleared up completely in four days. Those left untreated took a few days longer. A dead caterpillar rubbed on the arm produced some degree of rash and itching lasting for a few days. Immersion of the irritated area in water did not increase the itching nor cause it to begin again after it had cleared up. (Compare the Gympie Gympie stinging tree, *Laportea* species, discomfort from which may recur weeks later if the previously irritated area is wet.)

Treatment instituted consisted of fomentations with a one in 100 "Dettol" solution followed half an hour later by application of *Lotio Calaminæ* to the affected parts. In those cases in which urticarial phenomena were severe, ten minims of a one in 1,000 solution of adrenaline hydrochloride were injected subcutaneously twice a day for the first two days. With one exception foments and lotion gave great relief from the dermatitis. In the cases associated with facial œdema, the swelling began to subside after the first two injections of adrenaline. The following examples are quoted.

Reports of Cases.

CASE I.—Gunner A.E.H. awoke in the morning with intense itching over the shoulders and front of the chest. The rash was blotchy and erythematous, irregular in distribution generally, but in one place on the left shoulder it took the form of a mark about eight inches long by half an inch wide. There was some non-irritative erythema between areas of rash on the chest, probably urticarial in origin. Treatment was enhanced by injections of adrenaline.

CASE II.—Gunner D.B. "reported sick" several hours after rising, with swelling of the right upper eyelid. Examination of the body revealed the same typical, irregular dermatitis as in Case I, but in this case over the thorax and arms. Next day both eyes were almost closed and the face was puffy. After several injections of adrenaline the swellings subsided.

CASE III.—Gunner J.B. complained of being "bitten" by caterpillars. He displayed the same type of dermatitis as all other patients, and brought along for inspection one of the three caterpillars he had found on his blanket after waking. The distribution of the rash was limited to the skin of the right side of the thorax and the right axilla. He was unable to eat any breakfast and felt nauseated. He was kept under observation in the regimental aid post, and reported that the itch was lessened by treatment, but he took no food for the day other than drinks of tea. Nausea persisted throughout the next day. The following day he was well.

Comment.

The caterpillar as seen in this particular area consisted of the following sections: the head (with paired mouth parts on the under-surface), eleven segments and a smaller caudal extremity; paired thoracic claspers on the under-surface of the first three segments; plumose appendages on the under-surface of the sixth to ninth segments. All segments (including the caudal extremity, but not the head) have paired long and short, dorsal and lateral dark hairs, white at the tip; seen

under the microscope, the long hairs appeared slender and knife-like, the short ones like a broad spearhead containing numerous small cells. The caterpillar's body was black, its length one and a half inches, its width one-quarter of an inch. Many processions of the caterpillars were seen across tracks at night. Numerous nests composed of local foliage were found in trees.

Acknowledgements.

Our thanks are due to the Director-General of Medical Services and to Colonel H. M. Fisher, Assistant Director of Medical Services to an Australian division, for permission to publish this paper.

Reports of Cases.

SCRUB TYPHUS: AN UNUSUAL CASE SIMULATING MUMPS.

By H. S. PATTERSON,
Captain, Australian Army Medical Corps.

Clinical Record.

PRIVATE C.H., aged thirty-four years, reported to his regimental medical officer on March 2, 1944. He complained of swelling and pain, of one day's duration, on the right side of his face, and also of a redness, which he took to be a stye, on the right upper eyelid. He subsequently returned to duty, but several hours later reported again at the regimental aid post on account of giddiness and severe frontal headache. His temperature was 99·4° F. and the swelling of the right side of the face was more marked. The provisional diagnosis of mumps was made, and the soldier was transferred to a military hospital.

On his admission to hospital, a hard, tense swelling was present in the region of the right parotid gland, and the patient was admitted to the infectious ward. On the second day, the redness and swelling of the right upper eyelid were more obvious, and a small scabbed lesion was noticed at approximately the mid-point of the lid margin. On the fourth day a pink, macular rash appeared on the trunk, bilateral axillary adenitis made its appearance, and the patient complained of increasing severe frontal headache and backache. The temperature, which up to now had been remittent in type and had varied between 99·4° F. and 101·4° F., rose steeply to 103·4° F. The swelling in the region of the right parotid gland was still obvious, but no swelling of the left parotid or other salivary glands had occurred. In view of the appearance of the rash, the adenitis, the type of temperature chart and the severe headache and backache, the provisional diagnosis was altered to that of scrub typhus. This was confirmed by the Weil-Felix agglutination test, which was performed a week later, a serum agglutination of one in 1,280 being obtained. The illness ran a more or less typical course. The patient was miserable for a period of three weeks, complaining chiefly of headache and backache; he developed a cough on the fifth day, and high-pitched rhonchi and scattered crepitations were heard at the bases of both lungs; on the fifth day also a bilateral inguinal adenitis appeared, and the rash became confluent and spread to arms and legs. On the seventeenth day albuminuria appeared, but this was slight and cleared up in five days. The swelling of the face subsided at the same time. The temperature began to fall on the eighteenth day and was normal by the twenty-third day. Thereafter convalescence was uneventful.

Comment.

An unusual case of scrub typhus is reported, in which the original inoculation of the infection was in a most unusual site—on the margin of the right upper eyelid. The infection produced inflammation of the glands in the right parotid region, which led to an erroneous diagnosis of mumps. Subsequently a pink, macular rash appeared on the patient's trunk, and attention was drawn to the scabbed lesion on the eyelid and its similarity to the eschar of typhus. The diagnosis of typhus was clinched by the strongly positive agglutination reaction obtained with the patient's serum.

Acknowledgements.

Acknowledgement is made to the Director-General of Medical Services for permission to report this case, to Major B. Rosse Woods, commanding officer of an Australian camp hospital, and to Captain T. S. Gregory for the pathological work.

Reviews.

THE WORK OF SIR ALMROTH WRIGHT.

THE young medical practitioners of today may know that it was Sir Almroth Wright who introduced antityphoid inoculation many years ago. They will probably not know of his extraordinary and lengthy career, his passion for immunization, his flair for argument. Born in Ireland in 1861, he has recently reprinted the third volume of his collected researches, with very few changes.[1] It was previously published by Constable in 1909.

There will be few living in Sydney today who will remember Wright when he was demonstrator in physiology at the University of Sydney in 1889. He was followed in this post in 1891 by C. J. Martin, now Sir Charles Martin. Both these early teachers in the Sydney school became distinguished leaders of research in London. Wright eventually went to Saint Mary's Hospital and became the principal of its Institute of Pathology and Research. As one of his pupils and collaborators, Alexander Fleming, of penicillin fame, writes in "Recent Advances in Vaccine and Serum Therapy": "It is to the researches and persistence of Sir Almroth Wright that we owe the introduction of anti-typhoid vaccine. . . . Wright demonstrated that following the injection of killed typhoid cultures into healthy individuals, the serum of such inoculated men acquired a greatly enhanced bactericidal power to the typhoid bacillus. From observations made on troops in India and in the South African War, he convinced himself that antityphoid vaccination was a valuable procedure. The British Army authorities, however, refused to accept it until 1909."

The reprinting of this volume comes rather as a surprise, for its interest and value seem now to be mainly historical. In these days of chemotherapy, the bactericidins and opsonins of human serum and their ways have an old-fashioned flavour. In the treatment of an infection the practitioner of today wants to know whether a sulphonamide (or penicillin) is effective, then which sulphonamide is effective, what dosage to give and what the danger signals are. It is remarkable to look back upon the time-consuming techniques for estimation of the opsonic indices, performed and advocated by Wright and his school as a check on immunization against staphylococcal infections and the like, and tuberculosis. Whilst much of this work seems *vieux jeu*, it should be remembered that the modern *therapia sterilisans* is bacteriostatic rather than bactericidal. We still depend on some biological immune mechanisms to destroy and get rid of the bacteria. Active immune mechanisms are desirable. Wright was a great protagonist for the activation by vaccines of those mechanisms which gave increased humoral antibodies, an acquired active immunity. Will the methods of Wright ever be revived on a wide scale? And can they be used to reinforce chemotherapy and to tell us what is going on? At present chemotherapy has more liaison with serum therapy. Wright himself wrote in 1903: "The physician of the future will, I presume, take upon himself the role of an immunizator." He was correct to a limited degree as regards peace-time medicine in its preventive aspects—for example, diphtheria, pertussis. Most other forms of immunization are also preventive, but for troops and members of the services, the value of therapeutic immunization for already infected individuals, of which Wright wrote so much, is still controversial, and is very difficult of assessment. The author's own account of many cases is unconvincing. There is no doubt that the condition of some patients is greatly improved. Should we obtain more constant results if we could "condition" the patient or the vaccine aright? We want to know why results are at times "magical"; is the result *propter* or *post?* We have no answer as yet.

But Wright was a great fighter for what he believed, rightly or wrongly, to be the truth. He was a prolific writer and published works on antityphoid inoculation, on microscopy, on the technique of the teat and capillary tube and on preventive inoculation against pneumonia in the African native. At least one of his causes was lost, as the title of one of his books shows—namely, "The Unexpurgated Case against Women's Suffrage", published in 1913. Those who would like to know of the original work of Wright and his collaborators over the period from about 1897 to 1907 will find it in his "Studies on Immunization".

[1] "Studies on Immunization", by Sir Almroth E. Wright, M.D., F.R.S.; First Series; 1943. London: William Heinemann Medical Books Ltd. Pp. 421. Price: 25s. net.

The Medical Journal of Australia

SATURDAY, AUGUST 5, 1944.

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THE PREVENTION OF NEONATAL DEATHS.

THE advances of medical science, chiefly in the realms of preventive medicine, have resulted during the last forty or fifty years in a progressive reduction in the number of deaths among newly born infants. It is a little difficult to obtain statistics that will show the extent of this reduction, but some indication may be obtained by study of the statistics for deaths of infants under one year of age as set out in the "Official Year Book of the Commonwealth of Australia". In 1901 the mortality rate for infants under one year of age was 103·61 per thousand live births registered; in 1921 the rate was 65·73; in 1931 it was 42·14; in 1940 it was 38·43. While the reduced rates are noteworthy and may be quoted with satisfaction, they are not a cause for complacency. It has been stated that at a conservative estimate at least half the neonatal deaths are preventible; and since this estimate may be accepted, the duty of those who practise medicine is clear. If conditions that would be described as ideal could be called into being, neonatal deaths should be very few and far between. These conditions must therefore be sought. At the outset the statement will probably be made that sociological factors—the standard of living, food, clothing, fresh air and healthy surroundings—must be considered if infants are to be born healthy and grow to become healthy citizens. This is, of course, true, but though medicine is not directly responsible for the economic and social welfare of the people, its practitioners must realize—and most of them no doubt do—that the reduction of neonatal mortality ultimately rests with them. If the sociological factors are for the time being put on one side, enough knowledge is available in regard to the other factors to justify the contention that if this knowledge is properly applied, more and more neonatal deaths will be prevented.

The factors concerned in the reduction of neonatal mortality have been recently discussed in a symposium published under the auspices of the Section on Obstetrics and Gynecology of the American Medical Association.[1] The sociological factors were mentioned by Potter in the opening paper, but the discussions generally centred around those of pregnancy, labour, the puerperium and the early days of the infant's life. Most practitioners will include in their duties and responsibilities antenatal supervision, delivery, and the management of the child in the early days of its extrauterine existence. R. E. Arnell, who discussed the contributions to the symposium, would add to these both premarital and preconceptional examinations. These examinations have not been widely adopted in this country, desirable though they may be, and it is doubtful whether the majority of young Australians would submit to them, and having submitted, be guided by the results. Clearly the study of neonatal deaths calls for a detailed study of the causes of stillbirth. This was emphasized in 1930 by J. N. Cruickshank in a special study on the causes of neonatal death, undertaken for the Medical Research Council of Great Britain and published in the Special Report Series. (See THE MEDICAL JOURNAL OF AUSTRALIA, November 29, 1930.) Cruickshank based his report on a study of 800 post-mortem examinations. His classification of the cases was useful. His first group included those in which death was due to birth asphyxia, atelectasis, birth injury or prematurity; his second group included cases in which death was due to infective conditions; the third group was that of gross developmental defects. The frequency with which these causes operate is shown by Cruickshank's figures for his three groups—67·50%, 29·75% and 2·75% of the 800 cases respectively. The more important aspects of the subject may be included under the headings of prematurity, birth trauma and infections. These were dealt with by more than one of those who contributed to the symposium either by paper or in the discussion. They were also dealt with by L. G. Parsons, Professor in Diseases of Children of the University of Birmingham, in a lecture delivered before the Royal College of Physicians of London.[2]

An infant is said to be born prematurely when it is born after it has become viable and before full term has been reached. Since premature infants (and full-term infants, too) may be stillborn, the term neonatal death must for purposes of this discussion include stillbirths. Further, when a premature infant is stillborn, death may have resulted from intranatal causes or from some cause that operated far back in intrauterine life. In regard to the extent to which prematurity contributes to the death of babies, Tyson states that close on 50% of all neonatal deaths are concerned with prematurity alone or in relation to other causes of neonatal mortality. Sage holds that prematurity takes precedence over almost any other primary or contributing cause of infant deaths. Potter declares that prematurity is a direct cause of approximately one-fourth of all deaths occurring under one month of age and is a contributing factor in at least one additional fourth. Parsons said that in Birmingham in

[1] Edith L. Potter: "The Lessons to be Learned from a Study of Infant Deaths"; E. C. Sage: "Care of the Parturient Woman in Relation to Neonatal Mortality"; R. Torpin: "The Care of the Fetus during Labor"; R. M. Tyson: "Immediate Care of the Newborn in Relation to Neonatal Mortality"; *The Journal of the American Medical Association*, February 5, 1944, page 336.

[2] *The Lancet*, February 20, 1944.

the four-year period 1938-1941 there were 70,402 live births and that 54% of the neonatal deaths were those of premature infants. Prematurity was present in 5% of the live births, but in 40% of the stillbirths. When we seek the causes of prematurity to eliminate them, we realize that only some of them are known. Cruickshank pointed out shortly that prematurity might be due to ascertainable causes such as maternal heart lesions, pulmonary disease, infections of the urinary tract and so on. It was sometimes attributable to the effects of the toxæmia of pregnancy and sometimes it was due to some complication such as accidental ante-partum hæmorrhage or hæmorrhage from *placenta prævia*. He also added that the effects of ecbolic drugs and accidental or deliberate violence or over-exertion should not be overlooked. The cases in which the causes of prematurity are not known were held by Cruickshank to constitute a large proportion of the total. But whether its causes are known or not, prematurity may not only be in itself a cause of death, but it may act as an important predisposing cause to the development of neonatal infections. To prevent prematurity and to postpone the onset of labour until the period of gestation has run its full course are synonymous terms, and obviously if the known causes of prematurity can be removed, we shall have done all in our power to eliminate it. When premature birth is inevitable the task of the obstetrician is to see that injuries are absent and respiration is certain. Torpin enumerates the following factors as applicable to the delivery.

1. Induction of labour should be eliminated except for valid indications.
2. Prophylactic external version should be done if the head is not presenting.
3. What helps the mother is usually aid to the fœtus; in three words, water, sugar and oxygen.
4. Sedation of labour takes preference over stimulation.
5. When the cervix has been fully dilated two hours, delivery is quite safe if done by deep episiotomy and either Kristellar expression or low forceps.
6. Conduct of delivery by Cæsarean section is not the answer to reduction of mortality of the premature fœtus.
7. Vitamin *K* should be given.

Obstetricians may not agree with all these statements, but they would certainly form a basis for discussion in the elaboration of a confession of faith and purpose in this regard. Parsons quite rightly will not tolerate the view which calls in question the advisability of keeping alive many of the premature children. Most of them who survive, he states, become normal children. Actually many show eventually more than average mentality; among such persons quoted by Parsons are Voltaire, Rousseau, Victor Hugo, Isaac Newton and Winston Spencer Churchill. Parsons thinks that possibly one of his colleagues is right when he suggests as the reason for Churchill's premature birth the fact that "he could do as much in seven months as the rest of us could do in nine". When the child is born its immediate care is an urgent problem. Torpin, "for the sake of argument", makes the statement that medical practitioners should take the view that any infant weighing two and a half pounds at birth should survive; if it does not survive they should, he thinks, hold themselves responsible to ascertain exactly why it died, and how to prevent repetition of the outcome in later cases. This again is a challenging statement. There may be some difference of opinion about the weight of two and a half pounds, but there can be none about the rest of the statement. The minute care that must be lavished on the premature baby is well known, but whether it is possible outside modern and well-equipped obstetric hospitals is another matter. Of course it is not the modern equipment alone which is effective, for, as Parsons well puts it, skilled nursing will produce good results with a simple *régime*; without it, incubators, humidifiers, air-conditioned rooms with oxygen on tap will be unavailing. In point of fact if reference to this whole subject does no more than emphasize the possibility of saving the lives of premature babies by the careful adoption of known methods of treatment, it will not have been in vain.

To discuss trauma in relation to neonatal death in anything like an adequate fashion would mean a mention of almost every aspect of the practice of the obstetric art. Since this is impossible, reference to one or two points brought out in the symposium must suffice. Torpin was on safe ground in his contention that an adequately controlled test of labour would reduce operative delivery and make for the safety of the child. He holds that a test of labour should be given to all parturients who have an inlet antero-posterior diameter of nine centimetres or more. The test of labour evolved by him after six years' study of 6,000 deliveries includes uterine contractions lasting forty seconds every two to five minutes over a period of twenty to twenty-four hours with noticeable progress, the parturient being supported meanwhile with water, dextrose, vitamins and oxygen if necessary, *plus* proper sedation. At the end of this period he states that the fœtus will in most instances have been born. If it has not been born the head will be at least in the mid-pelvis where it may be delivered by forceps, or still floating, when low or extraperitoneal Cæsarean section may be done with safety. Another point emphasized was the value of X-ray examination in the conduct of labour. Torpin thinks that in time the X-ray control of abnormal labour may be held to be as essential as the use of X rays in the treatment of fractures. Both Torpin and Sage referred to the dangers of breech presentation. J. Parks, in discussing this question, pointed out that as long as the cord pulsates the infant receives oxygen. He added that "injuries and asphyxia in breech deliveries are more often avoided by a finger on the cord than by an eye on the clock".

The possibility of infection of the child after birth, whether it is premature or not, raises the question not only of procedure but also of responsibility. It was stated in our symposium that deaths within twenty-four hours of birth were to be laid at the door of the obstetrician, and that those occurring after that time were the concern of the pædiatrician. This is an artificial or academic distinction which finds no place in everyday practice in this country. It is important, however, to recognize that both obstetrics and pædiatrics can make contributions to this important subject. The Royal College of Physicians of London evidently thinks that physicians should be concerned when it asks a pædiatrician to discuss the matter.

Many aspects of the subject have not even been mentioned, but from the references that have been made it is clear that neonatal deaths can be still further reduced in number if everyone concerned in the practice of obstetrics, in the care of infants and in the discovery of the cause of disease wills that it shall be so.

Current Comment.

THE OLDER WORKER.

INDUSTRIAL MEDICINE is one of the more recent offshoots of medical practice. It is rapidly becoming highly technical in certain aspects, and the health and welfare of workers engaged in many callings present individual problems that often require very special knowledge. But with certain aspects we all make contact, and one of these is the relationship of performance of work of different kinds to advancing age. At the present time this problem is a very live one, since so many older people have worked harder than they otherwise might, have carried out strange and often surprisingly arduous tasks, and have even returned to work after a temporary retirement. It has been known for a long time that an increasing number of older people are found in civilized modern communities, and, further, that the physical condition, mental vigour and experience of many of them warrant their further employment. The war years have emphasized this, and have in addition shown that a surprising degree of adaptability is possessed by some of these oldsters. Lydia G. Giberson, reviving a contribution to a conference held in Washington in 1941 on the subject of "Mental Health in Later Maturity", has pointed out that, despite the increasing pace of social change, the responsible work in almost every national activity is being done by men and women over fifty years of age.[1] Further, the age group of forty-five to sixty-five is not only expanding numerically, it not only holds most of the financial power of the community, but the "democratic weight of superior numbers" is increasing. One effect of the years of depression was to lower the number of apprentices trained, and now that war experience has shown the paucity of young skilled workers due to this cause and to the inexorable demands of armed forces, a new light has been shed on the whole position. Whether one cautiously calls this shift of age groups a "later maturity among the citizens" as this author does, or whether one merely extends what has been always thought the most suitable age for certain employments, the result is the same. It looks as if our ideas about skilled workers must expand. But to the doctor the position is very important. Giberson even quotes one of the reasons for difficulties arising with older workers, as lack of specific medical facilities adapted to the needs of this group of employees. This would seem to be a myth, but none the less, thoughtful attention will have to be given to the particular problems presented by older workers. The Howard Fatigue Laboratory workers are quoted as finding that the rate of decline in capacity after forty-five years of age has been much exaggerated and that in general there is no warrant for saying that men over forty-five are less effective than others in industrial occupations. The author adds that these findings are equally true of women. It is recognized that there are special traits and difficulties evident in groups of older workers; these do not concern their medical attendants greatly. Giberson, however, makes reference to some special problems of medical importance. Amongst these are the emotional crisis that may occur about forty-five in women owing to the menopause, and similar disturbances in men a decade or more later. The doctor of experience should be able to help here; it is a familiar problem. Later comes another crisis, that of impending retirement, since so many industrial workers are unprepared for leisure. It is likely that the tendency to postpone the retiring age will not relieve this problem. The older worker is recognized to have greater value today, and he may take his abdication badly when it comes. Giberson makes some suggestions which may be useful, though these are industrial rather than medical. But it is well that we should exercise discretion in advising and handling older workers in their physical and mental disturbances and recognize the special circumstances. It is often in a doctor's power to sway a patient towards lessened or greater activity, and to point out to him how his usefulness may be increased or maintained; it may be that this power may be valuable in adding to the happiness of these older sharers of the world's work and to their value to the community.

[1] *The Canadian Medical Association Journal*, May, 1944.

PAIN REFERRED FROM SKELETAL STRUCTURES.

A NUMBER of years ago Sir Thomas Lewis and his associates carried out some patient and useful observations on the localization of pain produced in deep structures. It was found that zonal distribution could be demonstrated and a considerable amount of valuable information was gained. In the course of these experiments painful sensation was produced in the experimenters themselves and in other volunteers by injecting harmless though irritating solutions into predetermined places and noting the area in which pain was felt. This work has been followed up again recently by other investigators in the University of California Medical School. V. T. Inman and J. B. deC. M. Saunders have collected the results of 160 observations made on 26 subjects who were medical and nursing students and physicians.[1] The stimulus used consisted of mechanical scratching of a bony structure or even drilling with a wire, and chemical substances were also used, such as hypertonic saline solution and a weak solution of formic acid. An increase of pressure in the tissues was also produced by the introduction of solutions through special double-bored needles. It was found that the subjects localized the point of stimulation with great difficulty, especially when this was very deep, and in no case was the degree of accuracy comparable with that found on skin stimulation. There was further a certain time lag noticed in these experiments. The relative sensitivity of deep structures was investigated and it was found that the lowest threshold was possessed by periosteum, followed by ligaments, capsules of joints, tendons, fascia, and finally the least sensitive of all, muscle. The portion of structures nearest to their attachment to joints proved to be particularly sensitive. Some radiation of pain was always noticed, though the onset of this was sometimes quite slow, and another feature observed was that pain was continuous along the whole area of radiation. Radiation was in the line of the structure affected, but might be either proximal or distal. It was found possible to chart the areas of pain radiation, and these writers have attempted to relate them to areas of segmental innervation. They suggest that a lesion of deep mesodermal structures causes radiation of pain along a pathway corresponding to the approximate segmental innervation of the skeletal structures implicated. These areas of innervation do not correspond with the areas of the dermatomes. This is perhaps somewhat vague from the clinical point of view, but it is useful knowledge and a practical application is found in some further work from the same school on the mechanism of head pain. D. G. Campbell and C. M. Parsons[2] have investigated head pain by the same method above described. The irritation of specific regions caused pain with specific radiation. Thus irritation of the condylar region caused orbital and frontal pain, and of the nuchal region occipital pain, but with some reference to the forehead. It was also noted that there were accompaniments of an autonomic nature in some of these experiments, especially those affecting the suboccipital region. Without further detailed references to this work in which a definite mapping of head pain is attempted according to its site of origin, it may be said that this experimental evidence seems to show that head pain may arise from triggers in the structures outside the skull. The authors point out the importance of this concept in the investigation of post-traumatic headache. It does not always follow that pain felt in the head arises from intracranial structures. Clinicians have long been aware that it is often wise to look for sensitive trigger areas round about the head and neck, and this work is a useful reminder that there may be cases in which a troublesome and seemingly obscure pain, perhaps arising after injury to the head or neck, may be simply relieved by suitable measures such as the identification and anæsthetization of appropriate areas.

[1] *The Journal of Nervous and Mental Disease*, May, 1944.
[2] *Ibidem.*

Abstracts from Medical Literature.

PATHOLOGY.

Studies on Infectious Mononucleosis.

L. A. JULIANELLE, O. S. BIERBAUM AND CARL V. MOORE (*Annals of Internal Medicine*, February, 1944) report a series of experiments conducted to demonstrate a specific virus in infectious mononucleosis. The materials studied for transmission were blood, gargle washings, and excised lymph nodes, and the animals employed consisted mainly of rabbits, with a certain number of monkeys (*Macacus rhesus*) and the smaller animals. Although changes in the peripheral blood such as leucocytosis, lymphocytosis and monocytosis were observed with surprising regularity, the occurrence of abnormal white cells was negligible and their presence was only transient. The presence of heterophile antibody accompanying the inoculations was similarly irregular and of low frequency as well as titre. Attempts to transmit infectious mononucleosis to man were unsuccessful. Two subjects gargled with the throat washings of one patient, and two others permitted the intramuscular injection of a saline extract of cervical lymph nodes removed from patients during the febrile period of the disease. One of the latter subjects also sprayed his naso-pharynx with a portion of the saline extract. In no instance did hæmatological changes result which indicated that transmission had occurred.

Encephalopathy, Nephrosis, and Renal Granuloma following Sulphonamide Therapy.

BERNARD MAISEL, CHARLES S. KUBIK AND JAMES B. AYER (*Annals of Internal Medicine*, February, 1944) report a case of sulphonamide intoxication following the administration of small amounts of sulphanilamide, sulphathiazole and sulphadiazine, the outstanding clinical symptoms being those of cerebral disorder. At autopsy diffuse cerebral and cerebellar changes were found. In addition, although there was little clinical evidence of renal impairment, tubular degeneration, multinucleated giant cell granulomata and thrombophlebitis were found in the kidney. There was also a leucocytic reaction in the walls of the splenic trabecular veins. These renal and vascular changes were similar to those produced in experimental sulphonamide studies. Although some of the cerebral and cerebellar changes observed in this case are seen in cases of severe illness, the presence of characteristic renal sulphonamide changes suggests that the cerebral and cerebellar changes described also resulted from the sulphonamide therapy.

Myocarditis in Bronchiectasis.

ACCORDING to Otto Saphir (*Archives of Internal Medicine*, December, 1943) a type of myocarditis occurs in patients with bronchiectasis. It was found at autopsy in eight cases out of 152 and caused unexpected death three times. Clinically myocarditis was diagnosed in only one instance. The most significant clinical observation in these patients was a discrepancy between the relatively slight elevation of temperature and the high pulse rate. Bronchiectasis with the incumbent severe inflammatory changes constitutes a primary focus to which myocarditis can be ascribed. Also in some patients with bronchial asthma who die suddenly, myocarditis may be a contributory cause of the sudden death. From this study it is clear that in many instances a correct diagnosis as to the presence or absence of myocarditis can be made only if many sections are cut from the myocardium, and most carefully examined for the specific purpose of either finding or ruling out myocarditis.

Unusual Cardiac Lesions Associated with Chronic Multiple Rheumatoid Arthritis.

K. M. ENDICOTT (*Archives of Pathology*, January, 1944) reports two cases of multiple rheumatoid arthritis in which unusual cardiac lesions, strikingly similar histologically to the subcutaneous nodules of rheumatoid arthritis, were noted. Although most of the cardiac lesions associated with rheumatoid arthritis are indistinguishable from those produced by rheumatic fever, the cardiac lesions in these two cases indicate that in this disease the heart may occasionally react in the same manner as the subcutaneous tissues. Since the differences between the cardiac lesions described and those of typical rheumatic fever are differences of degree rather than of type, the author believes that the lesions can be considered a manifestation of rheumatic heart disease.

Effect of Œstrogens on the Testis in Hepatic Insufficiency.

ACCORDING to Thomas G. Morrione (*Archives of Pathology*, January, 1944) rigid criteria applied to the testes in 28 cases of Laennec's cirrhosis revealed the presence of significant testicular atrophy in sixteen instances. The incidence of significant testicular atrophy among persons with cirrhosis of the liver was 90% below the age of fifty years, but only 38·9% above the age of fifty. No evidence was found which indicated that chronic alcoholism is associated with testicular degeneration unless it is concurrent with severe hepatic damage. A study of 34 cases of hepatic failure other than Laennec's cirrhosis suggested that in order to result in atrophy of the testis damage to the liver must be severe, extensive and long-standing. The author presents animal experiments which show that in severe hepatic damage the testis is unusually susceptible to the action of an administration of or excess of œstrogen. The results of animal experiments point to failure of hepatic inactivation rather than to failure of biliary excretion of œstrogens as the mechanism by which testicular atrophy occurs.

Fulminating Meningococcic Infection with Bilateral Massive Adrenal Hæmorrhage (the Waterhouse-Friderichsen Syndrome).

HARRISON S. MARTLAND (*Archives of Pathology*, February, 1944) reports a series of 19 cases of the Waterhouse-Friderichsen syndrome and bases conclusions on his experience. This syndrome (cyanosis, purpura, petechiæ and bilateral massive hæmorrhages in the adrenal glands without gross meningitis) is always that of fulminating, fatal meningococcæmia, in which death occurs before there is marked invasion of the leptomeninges. This condition is not so rare as the literature would suggest, and is not limited to infancy or childhood, but is likely to be encountered in adults whenever meningococcic infections are prevalent. The making of the clinical diagnosis and anatomical diagnosis is comparatively simple after attention has been called to the condition. The hæmorrhages in the adrenal glands apparently are due to several factors: the toxin liberated by the enormous number of meningococci, the selective affinity of this toxin for capillary endothelium, and the presence of a susceptible rich delicate capillary network in the adrenal cortex. However, death is due more to the overwhelming meningococcæmia than to acute insufficiency of adrenal cortex. On account of the frequency of sudden and unexpected death, the sporadically occurring Waterhouse-Friderichsen syndrome in civilian life must sometimes be differentiated from food or chemical poisoning, trauma, negligence and even homicide.

Rheumatic Pneumonia.

IN a series of 63 cases of active and quiescent rheumatic fever there were, according to Karl T. Neubuerger, Erving F. Geever and Enid K. Rutledge (*Archives of Pathology*, January, 1944), eight with pulmonary inflammation showing distinctive features. These features were: peculiar granulomata in the alveolar ducts and alveoli; focal alveolitis with necrosis, fibrinous exudation and hyaline lining membranes; arteriolitis; mononuclear cell exudation and septal cell proliferation. The term "Masson body" is suggested for the rheumatic pulmonary granuloma, which is considered to be an equivalent of the Aschoff body in the heart.

Eosinophilic Granuloma of Bone.

ACCORDING to Henry L. Jaffe and Louis Lichtenstein (*Archives of Pathology*, February, 1944), eosinophilic granuloma of bone, Letterer-Siwe disease and Schüller-Christian disease may be considered as different clinico-anatomical expressions of the same basic disorder. This disorder apparently represents a peculiar inflammatory reaction to some as yet unknown agent of infection, and its individual lesions are characterized cytologically by the presence in them, at least at first, of large numbers of histiocytes. In eosinophilic granuloma of bone the lesions seem to develop only in the skeleton and often only in a single bone, and are given a distinctive cytological imprint by the abundance of eosinophile cells (especially eosinophilic leucocytes) intermingled with the histiocytes. The lesions do not tend to become scarified, collagenized and lipidized; they heal readily after simple curettage even without supplementary Röntgen irradiation of the site, and may indeed heal by resolution even without any therapeutic intervention whatever. In Letterer-Siwe disease the histiocytic lesions are widely distributed through the soft tissues (especially the lymphoid tissues) and the skeleton, the marrow sometimes being extensively affected

even when there are few actually destructive lesions in the bones. When widespread destructive lesions in the bones of the skull occur, Letterer-Siwe disease may even come to present the complete Christian triad of calvarial defects, *diabetes insipidus* and exophthalmos. Though the lesions in the soft tissues in cases of Letterer-Siwe disease do not show infiltration by eosinophile cells, the destructive lesions of bones do show it, especially early in their evolution. Indeed, the granulation tissue in such destructive skeletal lesions of Letterer-Siwe disease is indistinguishable microscopically from such tissue in corresponding lesions of eosinophilic granuloma of bone. In a case of Letterer-Siwe disease running a relatively protracted course of a year or more, one is likely to find that some of the lesions (especially those in the skeleton and those in the thymus and the lungs) are becoming scarified, collagenized and lipidized, the case thus passing over into the domain of Schüller-Christian disease. Schüller-Christian disease represents the basic disorder in its most chronic form, the presence or the absence of the Christian triad depending merely on whether or not the skull has been heavily involved. However, any case which is placed in this category should be expected to show, as the anatomical prerequisite, at least some lesions which have already become scarified, collagenized and lipidized and hence classifiable as lipogranulomata.

MORPHOLOGY.

Unilateral Cerebral Removals in Primates.

F. A. METTLER (*The Journal of Comparative Neurology*, October, 1943) gives an evaluation of the chronic physiological effects of extensive unilateral removals of the frontal cortex and of the cortex and striatum in a series of rhesus monkeys, and correlates these effects with the resulting anatomical degeneration. Until the level of the posterior commissure is reached, progressively more extensive unilateral cerebral removals produce a gradually progressive degradation in the motor performance of simians rather than an abrupt paralysis. Monomanual feeding with the involved hand is impaired after frontal lesion, but does not completely disappear until the striatum is removed. There is much less spasticity as measured by various tests. Superposition of striatal ablation upon hemidecortication causes little specific further loss of motor capacity (it does destroy monomanual feeding), and animals so affected still preserve a rather full complement of associated movements, including bimanual feeding and the ability to climb. The additional removal of the pallidum impairs the ability to perform associated movements, notably the use of the affected hand in climbing up and bimanual feeding. It also initiates a slowly progressive resistance to passive movement. As a result of these and other observations, the author comes to the following conclusions: (i) in the monkey, the thalamo-cortical circuit is required, not only for discriminating movements of the small musculature, but also for the fullest utilization of large muscle masses; (ii) elaborate automatic and complex associated movement patterns require the integrity of the thalamo-pallidal circuit, but relatively simple automatic and associated movements, such as walking, do not; (iii) the last-mentioned simple automatic movements become lost or submerged in a state of sustained resistance to passive movement when the subthalamus is lost; (iv) the highest degree of over-activity of the patellar reflex is associated with combined cortico-striatal loss rather than with loss of the cortex alone.

Some Connexions of the Amygdaloid Nucleus.

C. A. FOX (*The Journal of Comparative Neurology*, October, 1943) attempts to determine experimentally the cells of origin and the distribution of some of the fibre tracts associated with the amygdaloid nucleus. A large portion of the *stria terminalis* originates in the basal amygdaloid nucleus, particularly its caudal end, and projects to the septum, the preoptic region and the vicinity of the paraventricular nucleus of the hypothalamus. It was not possible by the Marchi technique to demonstrate a *stria medullaris* component or a commissural component in the *stria terminalis*, nor was it possible to show interamygdaloid connexions in the anterior commissure.

The Anterior Commissure.

C. A. FOX AND J. T. SCHMITZ (*The Journal of Comparative Neurology*, October, 1943) trace the course of the fibres of the anterior commissure. The anterior limb of the anterior commissure distributes fibres to the olfactory bulb, to the anterior olfactory nucleus, to the anterior portion of the pyriform cortex, and possibly also to the *tuberculum olfactorium* and the accessory olfactory bulb. The posterior limb of the anterior commissure, in the better Marchi preparations, could be traced into the external capsule in the region between the putamen and the claustrum. Obviously, this picture of the posterior limb is incomplete. The fibres in the posterior limb are more thinly myelinated than those in the anterior limb of the commissure and are not well demonstrated by the Marchi preparations. There is a suggestion, from the results obtained in one experiment, that the two claustra may be interconnected by way of the posterior limb of the anterior commissure. The fibres of the commissural component of the *stria terminalis* appeared normal in all the brains with lesions interrupting the anterior commissure near the mid-line. No conclusions are offered here concerning the specific sites of origin of the various components of the anterior commissure, because all lesions were directly within some part of the anterior commissure, involving either a portion or all of the commissure's fibres.

The Growth of Human Suprarenals.

C. A. SWINYARD (*The Anatomical Record*, October, 1943) made accurate volumetric determinations of the fœtal cortex, the adult cortex and the medulla of Negro suprarenal glands from subjects ranging in age from three and a half lunar months to seventeen years. At the end of the first trimester of prenatal life the medulla was found to be scattered in small clumps of cells and constituted less than 1·0% of the total gland volume. The medulla grew slowly and steadily throughout the fœtal period, infancy and childhood. The fœtal cortex grew rapidly during the last trimester of prenatal life and at birth constituted 85·1% of the cortex. The degeneration of the fœtal cortex during the first two weeks of post-natal life resulted in a loss of 50% in total gland volume. The stroma of the degenerating fœtal cortex occupied 15·9% of the total gland at the end of the first year and practically disappeared by the end of the second year. The adult cortex grew at an accelerated rate during the second and third trimester of pre-natal life and again during late childhood and puberty. It comprised 14·8% of the total cortex in the newborn and doubled its volume within three post-natal months. The adult cortico-medullary ratio was reached in the third year, but the total gland volume did not reach adult size until the seventeenth year. The adult cortex of the newborn is composed entirely of *zona glomerulosa*. The *zona fasciculata* first appeared during the second post-natal week. The *zona reticularis* made its initial appearance during the third post-natal month, and its formation appeared to be related to the mechanical forces of growth.

Double Hypophysis.

J. O. MCCALL (*The Anatomical Record*, October, 1943) gives a short description of the occurrence in a ten-millimetre pig embryo of a potentially double hypophysis, and suggests reasons for its appearance. Apparently the condition has never previously been recorded.

Combined Anterior and Posterior Spina Bifida.

R. L. SAUNDERS (*The Anatomical Record*, November, 1943) gives a detailed account of a cleft vertebral column or combined anterior and posterior *spina bifida* in a living human female infant. A rounded mass of mucous membrane projected from the lumbar region of the back; this overhung inferiorly a small fistula, which exuded meconium. An X-ray examination revealed a cleft condition of the lumbar part of the spine, and a catheter introduced into the fistula emerged at the anus. During the second month the mass steadily grew larger, and fæces were eventually passed forth *per fistulam et anum*. The child died in its fifth month. The author summarizes conditions found in 37 recorded cases of this rare condition, including regional incidence, sex, longevity, extent of the vertebral cleft, and the degree of involvement of the alimentary canal.

Agenesis of Corpus Callosum.

A. T. BUNTS AND J. S. CHAFFEE (*Archives of Neurology and Psychiatry*, January, 1944) review all the reported cases in English literature in which an ante-mortem diagnosis of agenesis of the *corpus callosum* is made, and discuss the embryology and function of the *corpus callosum*, its ætiological factors and the anomalies frequently associated with agenesis of it. The paper is illustrated with tables and figures.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the South Australian Branch of the British Medical Association was held at the Verco Theatre, Institute of Medical and Veterinary Science, Adelaide, on June 29, 1944, DR. E. A. H. RUSSELL, the President, in the chair.

Annual Report of the Council.

The annual report of the Council for the year ending June 30, 1944, was adopted on the motion of Dr. D. R. W. Cowan, seconded by Dr. M. Erichsen. The report is as follows.

At the annual general meeting held on June 24, 1943, officers and members of the Council were elected as follows:

President: E. A. H. Russell.

Vice-President: H. Powell.

Honorary Treasurer: P. T. S. Cherry.

Ordinary Members of Council: H. M. Jay, K. S. Hetzel, F. St. John Poole, L. G. Tassie.

At the meeting of the Council held on August 5, 1943, it was necessary to appoint an immediate past president owing to the election of Dr. R. John Verco as one of the Federal delegates of the Branch, and Dr. F. St. John Poole was elected. Dr. W. J. Betts was elected Honorary Medical Secretary, and in order to complete the number of ordinary members of the Council owing to the election of Dr. Poole as immediate past president, Dr. A. B. Russell, who was next in the order of voting at the annual meeting, was elected.

The following subcommittees were appointed by the Council to act during the year:

Scientific: H. M. Jay, J. C. Mayo, K. S. Hetzel, Honorary Medical Secretary.

Ethics: E. A. H. Russell, R. John Verco, H. Powell, H. M. Jay, J. S. Covernton, C. F. Drew, P. T. S. Cherry, Honorary Medical Secretary.

Contract Practice and Medical Planning: R. John Verco, H. Powell, C. F. Drew, F. St. John Poole, L. G. Tassie, J. S. Covernton, A. B. Russell.

Parliamentary Bills and Publicity: E. A. H. Russell, Sir Henry Newland, R. John Verco, P. T. S. Cherry.

Library: E. A. H. Russell, Sir Henry Newland, H. M. Jay, J. C. Mayo, K. S. Hetzel.

The President, Immediate Past President, Vice-President, Honorary Treasurer and Honorary Medical Secretary are *ex officio* members of all subcommittees.

Monthly General Meetings.

The activities of the Branch in this direction have been curtailed during the year owing to conditions brought about by the war. Every effort, however, has been made by the Council to provide regular monthly scientific meetings, but whilst this has not been possible, several meetings were held, the attendance, in view of so many members being absent on military service, being satisfactory. The Listerian Oration was suspended for the year. In addition to our own meetings, members were invited to meetings arranged by the Deputy Director of Medical Services, South Australian Lines of Communication Area, and the Royal Australasian College of Surgeons. The Council desires to thank those members who contributed papers *et cetera*, and those who in other ways assisted in making the meetings possible, their help being greatly appreciated. Thanks are also expressed to the Deputy Director of Medical Services and the Royal Australasian College of Surgeons for the invitation extended to members to attend meetings arranged by them. The following programme was carried out during the year:

October 28, 1943.—Clinical meeting at the Royal Adelaide Hospital.

November 25, 1943.—Clinical meeting at the Children's Hospital.

March 30, 1944.—Clinical meeting at the Royal Adelaide Hospital.

May 25, 1944.—Exhibition of the following films, kindly made available by the Royal Australian Air Force (Visual Education Branch) and shown at the Masonic Hall Picture Theatre, Fullarton: "Scabies" and "Neuro-Psychiatry".

Attendances at Council and Committee Meetings.	Council.	Contract Practice and Medical Planning.	Library.	Parliamentary Bills and Publicity.
Betts, W. J.	11	6	—	5
Cherry, P. T. S.	15	2	—	8
Covernton, J. S.	10	3	—	—
Drew, C. F.	19	10	—	—
Gartrell, E. F. (on Military Duty)	—	—	—	—
Hetzel, K. S.	17	—	3	—
Jay, H. M.	17	2	3	—
Mayo, J. C.	19	—	2	—
Newland, Sir H. S.	16	—	3	4
Poole, F. St. John	17	8	—	5
Powell, H.	7	5	—	3
Russell, A. B.	15	9	—	—
Russell, E. A. H.	19	11	2	10
Tassie, L. G.	14	1	—	1
Verco, R. John	15	8	—	7
Meetings held up to June 1, 1944	19	11	3	10

Members were also invited to the following meetings:

August 1, 1943.—Lecture by Colonel F. L. Wall, Deputy Director of Medical Services, on "Medical Experiences at Milne Bay".

August 4, 1943.—Clinical meeting by the Royal Australasian College of Surgeons.

February 7, 1944.—Lecture by Lieutenant-Colonel Horan on "The Gastroscope in Diagnosis".

Membership.

The membership of the Branch is 459, an increase of three on the previous year. The number of new members elected was 25, the balance representing deaths, transfers *et cetera*. It is with sincere regret that the Council records the deaths of Dr. W. Anstey Giles, Dr. A. V. Hillier, Dr. H. Rischbieth and Dr. A. F. Stokes. In the passing of Dr. Stokes the Branch lost a loyal and efficient member of both the Federal and State Councils. His life was dedicated to service, and the first meeting of the Council for the year was marred by the announcement of his death shortly after commencement. One of his last acts was to introduce the question of a roll of honour to members who served in all wars. Dr. Stokes was President of the Branch in 1937, was elected as one of the delegates on the Federal Council of the British Medical Association in 1937, and occupied that position at the time of his death. He was also representative of the Branch on the Council of the Australian Aerial Medical Services and Saint John Ambulance Association. His advice and assistance in the activities of the British Medical Association have been of great value to the Association and his death is deeply regretted. The Council has placed on the records of the Branch its appreciation of the services of Dr. Stokes.

Dr. Giles was President of the Branch during 1897-1898, and in 1938 was made a life member of the Association by the Parent Body in recognition of his fifty years' membership.

Representation on Boards et cetera.

Medical Board of South Australia: H. H. E. Russell.

Dental Board of South Australia: J. W. Close.

Nurses' Registration Board of South Australia: A. B. Russell during absence of L. A. Wilson on military duty.

Metropolitan Infectious Diseases Hospital Board: H. H. E. Russell, G. R. West.

Australian Aerial Medical Services Council: M. Erichsen.

Executive Council, Mothers and Babies' Health Association: R. John Verco.

State Medical Coordination Committee: M. Erichsen.

Central Council of Association, London: Isaac Jones.

Federal Council of the British Medical Association in Australia: Sir Henry Newland, R. John Verco.

Federal Council Contract Practice Committee: R. John Verco.

National Fitness Council: C. C. Jungfer.

Saint John Ambulance Association: H. G. Prest.

Representative, "The Medical Journal of Australia": W. J. Betts.

British Medical Hall Company, Limited, Directorate: F. St. John Poole, G. H. Burnell.

Medical Advisory Committee, Australian Red Cross, South Australian Division: E. A. H. Russell.

Sections.

Owing to the absence of so many members on active service, meetings of the sections have been practically suspended during the year.

Lodge Practices.

Rates of fees and conditions under which lodge practice is carried on remain the same as last year. No finality has been reached in regard to a Federal Common Form of Agreement. At the meetings of the Federal Council held in April and October last representatives of the Consultative Committee of the Friendly Societies' Association of Australia were received in conference. Although the Federal Council and the friendly societies were in agreement on many points, there were matters in connexion with friendly societies lodge practice still under discussion, and these had not been finalized.

Medical Planning.

The Federal Council at its meeting held on March 15, 1943, gave careful consideration to the question of the policy of the Federal Council in regard to the provision of medical services to the community. It was decided that the policy should be expressed in thirteen resolutions which were published in the report of the meeting in THE MEDICAL JOURNAL OF AUSTRALIA, April 24, 1943.

Since the last report of the Council, the Parliamentary Joint committee on Social Security submitted a report to the Federal Government, details of which were published in THE MEDICAL JOURNAL OF AUSTRALIA, July 17, 1943. This was considered by the Federal Council at its meeting in August last, when it was resolved that in planning for the future referred to in paragraph 6 of the report, that, if any scheme was formulated during hostilities, full opportunity for its consideration should be offered to the profession, including its members who were in the fighting forces, also that any proposals concerning the medical profession should not be placed before Parliament before details had been considered by the profession. The scheme of the National Health and Medical Research Council has been considered by the Branch Councils, and your Council submitted it to the Contract Practice and Medical Planning Committee for consideration and report. Several meetings of the committee were held and recommendations were made to the Council and sent on to the Federal Council. Meanwhile, the Parent Association had adopted certain fundamental principles that should form the basis of any future reorganization of the health services which were published in the *British Medical Journal*, August 7, 1943. These were, in the main, adopted by the Council, but several alterations and suggestions in regard to the "principles" were recommended to the Federal Council. In view of so many conflicting views on the future of medical practice and so many schemes that had been put forward, the Federal Council decided to form a Medical Planning Committee, its duties being the preparation and presentation to the Federal Council of a plan, or plans, of medical service embodying the principles of the British Medical Association as enunciated by the Federal Council from time to time.

Whilst certain principles have been adopted, these will need to be implemented if any alteration in the present method of medical services is contemplated. This work is one that will entail careful preparation and is being proceeded with.

Social Security, Sickness and Unemployment Benefits: Medical Certification.

In view of the proposal of the Commonwealth Government to provide sickness benefits, then obviously there must be medical certification. The Federal Council considered it important that its ideas should be formulated in regard to this matter. This was done, and certain proposals were submitted to the Branch Councils. With minor alterations the proposals were adopted by the Council of the South Australian Branch.

Immunization against Diphtheria.

The Council approached the Chief Secretary and expressed the opinion that steps should be taken to make immunization against diphtheria compulsory. The Chief Secretary advised that in all States immunization is making steady progress, but it is generally realized that compulsory measures of this nature are likely to defeat their objects, and a "conscience clause" nullifies the whole effort.

Witnessing Applications for Babies' Ration Books et cetera.

The continual and increasing demands made on the time of medical practitioners in witnessing numerous applications for rationed goods has received the attention of the Council, and the Federal Council were advised that: "In the opinion of the Council, doctors should not be expected to witness applications or give certificates for other than medical matters." It was felt that this was a federal matter, on which the Federal Council could approach the Commonwealth Minister.

Advisory Committee on Public Health.

The Council felt that it could not accept the invitation of the Government to appoint a representative on the Government Advisory Committee on Public Health, believing that the Government should primarily depend on an efficient State health department for advice on health matters, and that whilst the South Australian Branch of the British Medical Association is, at all times, willing to give its advice on any health matter that the Government desires, the Council is of the opinion that the South Australian Branch of the British Medical Association should retain its freedom as a professional body.

Federal Delegate.

Dr. R. John Verco was appointed as one of the representatives of the Branch on the Federal Council of the British Medical Association in place of the late Dr. A. F. Stokes.

Amendments to the Adoption of Children Act.

Under the original act power was given to the court to order the examination of a child by a psychologist appointed by the Director of Education. The Council was of the opinion that the examination should be controlled by a medical practitioner specially skilled in psychiatry. Recommendations were made to the Government that a psychiatric clinic be formed consisting of the following: a medical practitioner specially skilled in psychiatry, a qualified psychologist, an almoner or trained social worker. The Government in the amending bill made provision for the examination of a child by a psychiatrist instead of a psychologist.

British Medical Association Clinical Prize.

This prize has for some years been provided by the clinical section of the Branch. Owing to the absence of so many members with the armed forces, no funds were available during the past two years, and the prize was provided by the university. The members of the Council have personally contributed the amount of the prize for the next award.

Domestic Service for Doctors and Private Hospitals.

Early in the year the State Medical Coordination Committee was advised that the Council viewed with grave concern the lack of domestic service to the medical profession and in private hospitals, and asked the committee to take the matter up immediately with the manpower authorities. As the result of this, deputations from the committee have waited on the manpower authorities, and the Council has moved in other directions in the matter and forwarded recommendations to the authorities, with a view to assisting to overcome the difficulties. Although the present position leaves much to be desired, it is hoped that continual approach to the authorities will bring about a realization of the unsatisfactory state of things which exist, and that relief will be forthcoming, so that private hospitals, a valuable and essential service to the community, will be able to function. The restriction in regard to medical practitioners advertising for domestic help has now been lifted, so that doctors will now be allowed to advertise for help, subject to submission of advice to the manpower authorities when help is engaged.

Death of Dr. G. C. Anderson, Secretary of the Parent Association.

The loss of Dr. Anderson, who had worked at the headquarters of the British Medical Association for a quarter of a century, is a severe loss to the Association, particularly at the present time. Messages of sympathy were forwarded by the Council to the relatives of Dr. Anderson and to the Parent Association.

Visit of Dr. J. G. Hunter.

At the invitation of the Council, Dr. Hunter, General Secretary of the Federal Council of the British Medical Association in Australia, addressed members on January 15 last on "Medical Planning and the Organization of the Profession"; Dr. Hunter also referred to the *Pharmaceutical Benefits Act*. There was a good attendance at the meeting. The address was very much appreciated and valuable information was given to members on matters of particular importance at present. Dr. Hunter paid a tribute to the loyal support given to the Federal Council by the South Australian Branch.

Difficulty of Obtaining New and Second-Hand Cars for Doctors.

This is a matter seriously affecting members of the profession, particularly those members who have been on active service and disposed of their cars on enlistment, also those members whose cars have almost outlived their usefulness and will shortly require replacement. This matter had previously been brought under the notice of the State Medical Coordination Committee by the President. From information gathered, it would appear that the importation, and in fact the manufacture of new cars has practically ceased, and it is obvious that the profession will have to depend in the near future on the purchase of good second-hand cars, and some means of making these cars available will have to be adopted by the Government. Under the present National Security Regulations, cars can only be impressed for defence purposes, and not for other essential users. The attention of the State Medical Coordination Committee was drawn to the matter, which has been taken up with the Central Coordination Committee.

Advertising Proprietary Medicine.

The Council drew the attention of the Federal Council to the action of the Newspapers Proprietors' Association in England which has laid down certain rules governing the publication of advertisements for proprietary medicines, and adopting the principle that no advertisement would be accepted by the association which offered for sale to the public any medicine or treatment which is directly or by implication held out in terms calculated to lead to the belief that the medicine is effective in the treatment of certain diseases. The Federal Council was asked to bring the matter under the notice of the Federal Minister of Health, with a view to taking steps to regulate medical advertising and to control broadcasting.

Sickness and Accident Policy of Insurance Companies.

Consideration has been given to the anomalies occurring in the specified diseases contained in the policies of insurance companies in regard to sickness and accident. The present form of policy has been in existence for many years, and it was felt that there should be a general review of the specified diseases in the policy under which insurance is paid. As the matter was a federal one it was referred to the Federal Council.

Locum Fees.

A resolution was passed by the Federal Council suggesting to the Branch Councils that the fees for *locum tenentes* should be from twelve to fourteen guineas per week. This matter had previously been before the Council, when it was felt that there should be no departure from the ruling rate in South Australia during the war. The increase in fees had emanated in the other States where the medical fees were higher than in this State. The Council decided to reaffirm the previous decision, namely, that the present minimum rate of ten guineas per week be the rate for South Australia.

Sale of Practices.

Members have been advised under the "Protection of Practices" undertaking that the Council was of the opinion that no sale or transfer of practices except in cases of death or extreme sickness should take place during the war, except with the approval of the Council, and that each case submitted would be dealt with on its merits. This opinion has been expressed with a view to enabling those members who are away on full-time military service to have the opportunity of tendering for any practice which is available for sale.

Control of Tuberculosis.

In order to obtain some decisive action on the part of the South Australian Government on the lines previously recommended by the South Australian Branch of the British Medical Association and other bodies, the Council again approached the South Australian Minister of Health and pointed out that although several reports had been submitted to the Government, some of them as far back as 1909, no concerted effort is made to check a disease which is preventible, but which, nevertheless, takes off young Australians in thousands every year. The Minister was advised that the Association is willing to place at the disposal of the Government any special information or expert opinion of which it may be in possession, and in the meantime suggests the creation of a division of tuberculosis, preferably as a part of a reorganized Department of Health, and the appointment of a director of tuberculosis to later direct and coordinate all the anti-tuberculosis activities of the State.

The Minister replied that the suggestions made by the Council are in keeping with the proposals drawn up and announced in the policy speech of the Premier. The reorganization of the department has been delayed pending relief of the manpower situation which will enable necessary additional medical and technical personnel being available. It is hoped that circumstances will permit early consideration of final details and promulgation of the schemes. As the State election was approaching, the Council decided to leave the matter in abeyance until this was over, when whatever further action thought necessary will be taken.

Issue of Ration Book on Behalf of a Baby.

The Council, realizing the inconvenience suffered by the expectant mother owing to the regulation which does not permit the issue of pre-natal coupons until she is over four months pregnant, has asked the Federal Council to approach the Federal Government and request that the issue of a single medical certificate of pregnancy should be immediately operable for the issue of pre-natal coupons.

Federal Council Secretariat.

Having in view the need of proper and thorough organization of the profession throughout Australia, the Federal Council considered the advisability of appointing a full-time secretary. A subcommittee of the Federal Council was appointed to inquire into and report on the matter. At a meeting held on January 31 last a report was submitted. The suggestion had previously been made that the General Secretary, Dr. J. G. Hunter, should be released as secretary of the New South Wales Branch in order to take up the duties of full-time secretary of the Federal Council. Whilst the New South Wales Branch was willing to release Dr. Hunter, it was thought that, unless the matter was very urgent, the release should be a gradual process, and suggested that Dr. Hunter's services should be available on the following basis, namely, that he should spend six months in visiting the Branches on Federal Council business, and that the remaining six months of his time should be spent at the office in Sydney, where his services would be available both to the Federal Council and to the New South Wales Branch. This arrangement was adopted by the Federal Council.

Pharmaceutical Benefits Act.

A statement was submitted by representatives of the medical profession to the Minister of Health at a conference at Canberra on December 8 last, that the medical profession recognize fully that the restoration to health and the alleviation of suffering should be their paramount consideration, and that holding this opinion it was considered essential that in the acceptance of responsibility for the treatment of the sick the medical profession must be entirely untrammelled in regard to the therapeutic measures to be adopted. For this reason it was felt that the welfare of the sick would be seriously jeopardized by the adoption of any scheme which would limit the freedom of a doctor in prescribing for each of his patients exactly what medicine he regards as most suitable to restore them to health.

This statement was approved by the Federal Council, who under date of February 7, 1944, further advised the Minister of Health that the Federal Council would be willing to recommend to the members of the British Medical Association in Australia the fullest cooperation in the use of an official formulary provided that where a drug is ordered which is not within the formulary, the patient shall be supplied with such drug without cost nevertheless. Further, that in the opinion of the Federal Council, the pharmacy benefits scheme will not materially improve the health of the community and that the large expenditure involved could be much better devoted to other measures, such as hospital construction and equipment, care and treatment of sufferers from tuberculosis, maternal and child welfare, and diagnosis and treatment of cancer.

The Council of the South Australian Branch supported the views of the Federal Council. The Federal Government, however, did not follow the advice of the profession and the *Pharmaceutical Benefits Act* has passed through both Houses and in due course will be proclaimed.

Three possibilities as to the attitude of the profession have now arisen, and were submitted to the Branch Councils by the Federal Council, namely, to cooperate with the authorities and provide the pharmaceutical benefits to the community and that all prescriptions should be within the formulary set down, give a measure of cooperation, using the formulary whenever convenient, but always reserving the right to prescribe without the formulary, or not in any way to cooperate by either using the formulary or the prescribed forms. The South Australian Branch Council has recommended the following to the Federal Council, namely, the profession to give a measure of cooperation, using the formulary whenever convenient, but always reserving the right to prescribe without the formulary and without cost to the patient in accordance with the decision of the Federal Council.

Rehabilitation of Medical Officers of the Armed Forces.

The question as to how rehabilitation can best be effected is one that has had the close attention of the Council during the year. Many factors have to be taken into consideration; finance is a most important one, also post-graduate experience. Many suggestions have been placed before the Council through the Federal Council and other channels, but up to the present, no definite policy has been arrived at. The Council has, however, formed a special Rehabilitation Committee to inquire into the question of the rehabilitation of medical officers of the armed forces. There is much to be done before a scheme can be placed before members, and the matter will need very careful and unhurried consideration, in order that those members who are at present serving with the armed forces will receive every assistance, if needed, on their return to civil practice.

Honours and Awards to Members.

The Council tenders its congratulations to the following members on the honour conferred on them: Captain J. D. Fotheringham, M.C.; Surgeon Lieutenant R. M. MacIntosh, M.B.E.; Major R. H. Formby, mentioned in dispatches; Major G. T. Gibson, mentioned in dispatches; Major J. R. Cornish, mentioned in dispatches; Major R. N. C. Bickford, mentioned in dispatches; Captain K. Viner-Smith, mentioned in dispatches; Major-General S. R. Burston, Knighthood of the Order of Saint John of Jerusalem; Dr. L. J. Dunstone, Officer of the Order of Saint John of Jerusalem; Dr. L. G. Tassie, Admission to the Order of Saint John of Jerusalem.

The above report is a summary only, and represents some of the activities of the Council. The past year has probably been the busiest and most exacting for the profession in the history of the Branch. The number of meetings of the Council and subcommittees indicate the demands made in the interests of the profession. It has been found necessary to have bi-monthly meetings of the Council and Medical Planning Subcommittee. This is not all. Many deputations to the Government and government departments and other interviews to put forward the views of the Council, often at very short notice, have been found necessary.

The fifth year of war has not diminished the demands made on members in the service of their country. It is with infinite pride that the Council records that 100% of the young graduates after a gruelling and forced undergraduate study offer themselves for active service abroad immediately. The members away on active service continue to do all that is required of them, often under most disagreeable conditions—they deserve well of their country, and it is continually before the Council that these two groups, who will carry on the future burden of medical practice, will receive their just reward in post-war rehabilitation. The loyal service to the community of members who have been denied the honour of service abroad is also appreciated, and many of the deaths amongst them could be considered battle casualties just as much as their comrades who fell in the last war.

Lastly, the Council wishes to place on record the loyal service of your lay secretary. Although Mr. Dobbie has been without the assistance of his son, who is still abroad with the Australian Imperial Force, he has carried on with the help of Miss Dobbie, who also deserves and receives our thanks.

I desire to tender to members of the Council my sincere thanks for their loyalty and cooperation during the year. Ready response has been made to the many calls on their time which has been of inestimable help to me throughout the year.

(Signed) E. A. H. RUSSELL, President.

Financial Statement.

The financial statement for the year ended December 31, 1943, was presented by Dr. P. S. Cherry, the Honorary Treasurer. The financial statement was adopted on the motion of Dr. Cherry, seconded by Dr. H. Gilbert.

Income and Expenditure Account, December 31, 1943.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To British Medical Association, London	575 15 0		By Subscriptions—		
„ THE MEDICAL JOURNAL OF AUSTRALIA	374 1 0		City	1,381 12 6	
		949 16 0	Country	442 14 6	
„ Library Subscription		86 5 0	Accrued	89 10 0	
„ Federal Council Capitation Fee		123 0 0			1,913 17 0
„ Postages and Telegrams		50 18 2	„ Interest		11 1 2
„ Stationery and Printing		97 18 8	„ Medical Certificate Books		4 15 11
„ Telephone		34 13 7	„ Balance transferred to General Fund		71 14 0
„ Rent		50 10 6			
„ Salaries		554 7 6			
„ Depreciation		9 0 0			
„ General Expense		44 18 8			
		£2,001 8 1			£2,001 8 1

LIBRARY FUND ACCOUNT, DECEMBER 31, 1943.

	£ s. d.		£ s. d.
To Adelaide University	150 0 0	By Balance brought down, December 31, 1942	183 7 3
„ Depreciation	4 15 0	„ Interest	5 15 5
„ Balance	120 12 8	„ Subscriptions	86 5 0
	£275 7 8		£275 7 8

GENERAL FUND ACCOUNT.

	£ s. d.		£ s. d.
To Income and Expenditure Account	71 14 0	By Balance brought down, December 31, 1943	2,929 16 4
„ Balance	2,858 2 4		
	£2,929 16 4		£2,929 16 4

Balance Sheet as at December 31, 1943.

LIABILITIES.	£ s. d.	£ s. d.
To British Medical Association, London—		
Paid Subscriptions	42 1 6	
Unpaid Subscriptions	28 15 6	
		70 17 0
„ THE MEDICAL JOURNAL OF AUSTRALIA—		
Paid Subscriptions	26 0 0	
Unpaid Subscriptions	16 10 0	
		42 10 0
„ Subscriptions paid in advance		5 0 0
„ Library Fund		120 12 8
„ Lister Oration Fund		59 8 11
„ University of Adelaide (Library Account)		150 0 0
„ Federal Council Capitation Fee		123 0 0
„ Sundry Creditors		145 13 5
„ National Insurance Fund		353 15 4
„ British Medical Hall Dividend Account		239 10 0
„ General Fund		2,858 2 4
		£4,168 9 8

ASSETS.	£ s. d.	£ s. d.
By Plant and Fittings	58 0 0	
Less Depreciation	6 0 0	
		52 0 0
„ British Medical Hall Company, Limited, Share Account	2,580 0 0	
„ British Medical Hall Company, Limited, Current Account	201 3 0	
		2,781 3 0
„ Library Account—		
Delineascope	12 15 0	
Projector	18 10 0	
	31 5 0	
Less Depreciation	4 15 0	
		26 10 0
„ Library Account (Savings Bank)		263 11 8
„ Lister Medals and Dies	15 0 0	
Less Depreciation	3 0 0	
		12 0 0
„ Subscriptions owing		207 10 7
„ Stocks—		
Hospital Forms	15 7	
Medical Certificate Books	14 0 3	
Stationery	40 0 0	
		54 15 10
„ Sundry Debtors		66 0 7
„ National Health Insurance Fund—		
Savings Bank of South Australia	34 5 4	
Commonwealth Loan	300 0 0	
		334 5 4
„ Lister Savings Bank Account		59 8 11
„ Cash—		
Commonwealth Savings Bank	15 17 4	
Savings Bank of South Australia	241 8 11	
National Bank of Australasia, Limited	38 15 2	
In Hand	15 2 4	
		311 3 9
		£4,168 9 8

WALTER C. DOBBIE, Secretary. PERCIVAL T. S. CHERRY, Honorary Treasurer.

We hereby report:

(1) That we have examined the Books and Accounts of the South Australian Branch of the British Medical Association, Incorporated, for the year ended December 31, 1943.

(2) That we have received all the information and explanations we have required.

(3) That in our opinion the above balance sheet is properly drawn up so as to exhibit a true and correct view of the affairs of the Branch as at December 31, 1943, according to the best of our information, the explanations given us, and as shown by the books produced.

Adelaide,
April 28, 1944.

MUECKE, PICKERING & MITTON,
Chartered Accountants (Australia), Auditors.

Election of Office-Bearers.

The following office-bearers were elected for the ensuing twelve months.

President: Dr. H. M. Jay.
Vice-President: Dr. B. H. Swift.
Honorary Treasurer: Dr. P. T. S. Cherry.
Honorary Medical Secretary: Dr. W. J. Betts.
Members of Council: Dr. L. R. Mallen, Dr. E. L. Symons, Dr. C. H. Schafer, Dr. E. F. West.

Messrs. Muecke, Pickering and Mitton were elected auidtors on the motion of Dr. P. T. S. Cherry, seconded by Dr. F. St. John Poole.

Induction of President.

Dr. E. A. H. Russell inducted Dr. H. M. Jay into the office of president and invested him with the president's badge of office. In congratulating Dr. Jay, Dr. Russell said that he thought the coming year would be difficult on account of the many important problems that would have to be faced. He was sure, however, that with the tenacity of purpose characteristic of him, Dr. Jay would fill the office with credit to himself and benefit to the Branch.

Dr. Jay thanked the members for his election and said that he would do his best to merit their confidence. He felt that he had behind him a strong council; he would have the help and restraining influence of its members, and he hoped that at the end of his term of office the Branch would not regret its choice.

Thanks to the Retiring Members of the Council.

Dr. L. R. Mallen moved a vote of thanks to the retiring members of the Council—Dr. H. Powell, Dr. C. F. Drew, Dr. E. F. Gartrell, Dr. J. C. Mayo and Dr. J. S. Covernton. The motion was seconded by Dr. E. F. West and carried by acclamation.

Retiring President's Address.

Dr. E. A. H. Russell then read his retiring president's address (see page 125).

A vote of thanks to Dr. Russell for his address was carried on the motion of Dr. J. C. Mayo, seconded by Dr. P. S. Messent.

SCIENTIFIC.

A MEETING of the New South Wales Branch of the British Medical Association was held on June 22, 1944, at the Royal North Shore Hospital of Sydney. The meeting took the form of a number of clinical demonstrations by members of the honorary medical staff of the hospital. Part of this report was published in the issue of July 29, 1944.

Patent Ductus Arteriosus Treated Surgically.

DR. B. T. SHALLARD showed a female patient, aged eight years, who had been admitted to hospital on July 12, 1943. She had no symptoms. The apex beat was palpable two inches from the mid-line in the fourth left intercostal space; no palpable thrill was present. A continuous murmur was heard; it was maximal in the second left intercostal space and more pronounced during systole. The systolic blood pressure was 120 millimetres of mercury and the diastolic pressure was 60. No cyanosis or clubbing of the fingers was present. On July 15 operation was performed, and on August 2 the patient was discharged from hospital. No cardiac murmurs were audible, and the blood pressure was 80 millimetres of mercury (systolic) and 45 millimetres (diastolic).

Dr. Shallard next showed a female patient, aged seven years, who had been admitted to hospital on November 15,

1943. She had no symptoms, except that she became tired easily. The apex beat was palpable in the fifth left intercostal space, three and three-quarter inches from the mid-line. A thrill was palpable in the second and third left intercostal spaces; it was of maximum intensity in the second space one and a half inches from the mid-line. A continuous murmur was heard; it was maximal in the second left intercostal space, and more pronounced during systole. The systolic blood pressure was 105 millimetres of mercury and the diastolic pressure 35. No cyanosis or clubbing of the fingers was present. Operation was performed on November 18, and the patient was discharged from hospital on December 17. No cardiac murmurs were audible and the blood pressure was 90 millimetres of mercury (systolic) and 35 millimetres (diastolic).

Dr. Shallard's third patient was a male, aged ten years, who had been admitted to hospital on March 27, 1944. He was pale and suffered from dyspnœa. The apex beat was palpable in the fifth left intercostal space medial to the mid-clavicular line; a thrill was palpable in the pulmonary area. A continuous murmur was audible in the second left intercostal space; it was more pronounced during systole. The systolic blood pressure was 115 millimetres of mercury and the diastolic pressure was 55. No cyanosis or clubbing of the fingers was present. Operation was performed on March 30, and the patient was discharged from hospital on May 11. No cardiac murmurs were present, and the blood pressure was 115 millimetres of mercury (systolic) and 80 millimetres (diastolic).

Benign Giant-Cell Tumour of the Maxilla.

DR. E. P. BLASHKI showed a female patient, aged eleven years, who had had a noticeably increasing swelling on the face on the ascending left maxillary ramus below the medial canthus. Its rate of increase was moderate, and on palpation it felt as of cystic origin. A cystic area was visible in the X-ray film.

An exploratory incision was made; it opened a cyst-like area filled with blood clot. Pathological examination of several small pieces of tissue, dark red in colour, revealed a benign giant-celled tumour of bone. Local invasion and recurrence were considered likely. A fresh incision was made and the cyst contents were carefully scraped away. This was not difficult except on the inner portion, where the wall was in contact with the lachrymal sac instead of bone. The cavity was packed loosely for two weeks. Dr. Blashki said that there was a possibility of local recurrence. Such cysts were not common in that area, but more frequently occurred in the long bones.

Laryngeal Carcinoma Treated with Radon.

Dr. Blashki also showed a male patient, aged eighty-five years, who had complained of hoarseness of twelve to eighteen months' duration. Examination revealed proliferated masses of the left vocal cord with some interference with movement. Pathological examination of tissue revealed that the lesion was a squamous carcinoma, in parts of which the papillomatous structure which evidently preceded the development of the carcinoma was still recognizable.

On account of the patient's age it was decided not to perform a laryngo-fissure, but after consultation with Dr. H. J. Ham, Honorary Director of Radium Therapy, a modification of the Harmer-Finzi technique was adopted. A mid-line incision was made down to the perichondrium of the thyreoid cartilage, and the muscles were retracted. Five long radon needles five centimetres long and equivalent to 25 millicuries were inserted on the deep surface of the muscles. The wound was closed except for the emergence of the securing threads at the lower end. After seven days the needles were removed without reopening of the wound; a small curette was threaded on the securing thread and slid up to the needle to manœuvre it. "Pentothal Sodium" anæsthesia was used for the operation, but the needles were removed without anæsthesia. Dr. Blashki said that the reaction had not yet entirely ceased, and it was not sure that further treatment would not be required. A second biopsy would be made soon.

Œsophageal Pouch: Cardiospasm.

Dr. Blashki's third patient was a male, aged thirty-nine years. On his admission to hospital on October 20, 1943, he was in poor condition; he was said to have been discharged from the army with a diagnosis of diverticulum of the œsophagus. He was first given an ordinary opaque bolus, and X-ray examination failed to reveal any diverticulum, but suggested a cardiospasm. Œsophagoscopy was then performed; it revealed pronounced cardiospasm and an enormously dilated œsophagus. Attempts to dilate the cardia with gum-elastic bougies did not succeed, as the bougie was grasped tightly in the orifice and withdrawn with great difficulty, being damaged in the process. A further X-ray examination was made on October 23 to see the patency of the cardia; he was given liquid barium, and this filled up a startlingly large cavity in the chest.

On November 5 a fresh œsophagoscopic examination was made by means of the Souttar œsophagoscope, and this large cavity was explored and measured. Its dimensions were seven centimetres by thirteen centimetres; its walls were smooth and the orifice was very large. It was at the level of the bifurcation of the bronchi.

Dr. Blashki said that it had not been decided what was the origin or nature of this sac. Diverticula were usually classed as "pulsion", when they arose in the hypopharynx from the one site, or "traction", when they occurred in the lower part of the tract owing to pulling from healing tuberculous glands. These diverticula were usually small. The present sac did not correspond to either of these descriptions and was probably some kind of congenital abnormality. Treatment of the cardiospasm was undertaken by Dr. F. E. Stayner, who performed gastrotomy and manually dilated the cardiac orifice from below. The result had been satisfactory. The patient had recently visited the hospital, and said that he had no difficulty at all with his food and had increased his weight by 56 pounds.

(To be continued.)

Correspondence.

MEDICINE AND SOCIOLOGY.

SIR: I am afraid that this answer to Dr. Dane's onslaught against socialism in the journal of July 1, 1944, must be distressingly political; but otherwise it would be impossible to reply. However, everything now has a political implication, even the weather, which was a good democrat at Dunkirk, and a Fascist on the beaches of Normandy.

Quite a number of Dr. Dane's statements need comment. "The full measure of good health could possibly be attained under any political system provided the economic structure was based on justice." Exactly. But history has not shown me any economic system based on justice; that is why socialists wish to see a change to one that is.

In discussing the Stockton-on-Tees experiment, Dr. Dane is very careless with his facts. He says: "The high rent paid for the houses was on account of the high price paid for the land, not the cost of the house." The urge to be a good Henry Georger has led him astray; they were model houses, and the rents were 9s. per week.

"Common observation" does not show that Laski's theory of the State is wrong; it shows, to any careful observer of history, that in practically every clash between the working and the possessing class, if the State intervenes, it is on the side of the possessors. Only the political sentimentalist now looks on the modern State as the unbiased umpire in any serious class dispute.

As for the "Dictatorship of the Proletariat", every violent revolution must be followed for a time by the coercion of the defeated faction; in the case of Russia this meant that the great bulk of the population secured their gains by seeing that Czarists had no opportunity for counter-revolution. The franchise was made universal about twenty years after the revolution. If Dr. Dane thinks that was an unduly long period of suppression he might glance at English history, and see how long Catholics were denied any civil rights after our own "glorious revolution".

Dr. Dane sounds rather disgruntled that socialists should refer to the present economic system as "capitalism"; if he can suggest a better title I am sure we should not mind using it. By any other name it will smell as badly.

I do not see what point he is trying to make when he compares the destruction of food by the "capitalists" with the destruction of cattle by Russian peasants; they are in no way related. The destruction of food was a calculated policy for keeping prices up when millions of unemployed were below the breadline; the destruction of cattle was done by ignorant peasants, sometimes incited by saboteurs, in blind resistance to a necessary government policy. Anyone with any historic sense knows now how necessary was the rapid collectivization of the farms. Without efficient large-

scale farming there could be no rapid industrialization; without industrialization there would have been no mechanized Red Army; without the Red Army we would now be facing a Fascist bloc controlling all the resources and all the manpower from the Mediterranean to the Arctic, and from the North Sea to the Pacific. Stalin, in his "Dizzy with Success", showed that he knew very well that mistakes were made during the period of collectivization, and suggested remedies. I think we can believe that the Soviet Government understood both the necessity for collectivization and its inevitable difficulties and hardships, at least as well as the Soviet's detractors, to whom Dr. Dane has gone for his quotations and figures.

"Capitalism has nothing like this on its records." I invite all who believe that to read H. N. Brailsford's "Subject India". I suggest Brailsford because he is an English Liberal, and should not be suspect of "anti-British" bias.

It is news to me that Tolstoi stated the case for the Right. (By the way, how is one to know that he is "the greatest of all Russians"?) I had imagined that he used his great intellect and his great moral qualities to protest against its terrible injustices. I have studied the works of Henry George, and I believe him to have been a good man and a true humanitarian who understood most of the causes of social evil; probably, if he had lived to see the growth of monopoly, he would have become a socialist, being of a more flexible mind than many of his disciples. I am willing to give Max Hirsch a fair try if Dr. Dane will send him along.

Dr. Dane sees socialism and democracy as opposed to each other; I see socialism as the fulfilment of democracy. Democracy—power in the hands of the people—we have never yet had; we have its shadow in the right to elect our members of parliament, but the substance remains outside our grasp, and must do so while great aggregations of capital are owned by a few men, and used to make a profit, instead of being owned by the community and used to build for everybody the best possible life. One small instance should indicate the limitations of our democracy: Wickham Steed, in "The Press", tells how, during the turmoil just before the present war, an item of news of great importance for the formation of a correct public opinion was kept out of practically every paper in England by the financial pressure of a group of advertisers, because they feared the news would depress the market.

I am as passionately eager to live in a real democracy as is Dr. Dane, but I know that there is no possibility of it while monopolies and cartels wield an economic power which, in its influence over our lives, is often more real than the State power.

Yours, etc.,

E. P. DARK.

Katoomba,
New South Wales,
July 22, 1944.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 145, of July 20, 1944.

NAVAL FORCES OF THE COMMONWEALTH.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

Ante-dating Seniority.—The seniority of Temporary Surgeon Lieutenant (D) James Richard David Cotton is ante-dated to 19th October, 1942.

Royal Australian Naval Reserve.

Appointment.—Colin Graham Alderman and Marcus Gordon Jansen are appointed Surgeon Lieutenants, dated 24th May, 1944.

ROYAL AUSTRALIAN AIR FORCE.

Citizen Air Force: Medical Branch.

The following Flight Lieutenants are transferred from the Reserve to the Active List with effect from the dates indicated: N. M. Kater (267549), B. T. Dowd (267562), R. G. Skinner (267526), C. R. Ratcliff (267517), I. H. F. Swain (267551), C. R. Wherrett (267599), B. V. Mutton (267570), C. Rowe (7155), R. J. Rutherford (267533), R. T. Davies (257502), K. H. Sisson (257576), R. J. D. Giblin (267571), 14th May, 1944, J. B. Craig (297223), 23rd May, 1944.

Permanent Air Force: Medical Branch.

Temporary Squadron Leader F. R. Wicks (281655) is granted the acting rank of Wing Commander whilst occupying a Wing Commander post with effect from 1st May, 1944.

CASUALTIES.

ACCORDING to the casualty list received on July 27, 1944, Captain N. C. Duncanson, A.A.M.C., Collingwood, Victoria, has been removed from the "seriously ill" list.

According to the casualty list received on July 27, 1944, Captain J. F. Park, A.A.M.C., Prahran, Victoria, who was previously reported missing, believed killed, is now reported to have been killed in action.

Obituary.

GEORGE HENRY STANDISH LIGHTOLLER.

WE are indebted to Professor A. N. Burkitt for the following appreciation of the late Dr. George Henry Standish Lightoller.

On May 4, 1944, Dr. George Henry Standish Lightoller died of heart disease. Standish Lightoller was the son of Dr. H. M. Lightoller, of Ipswich, Queensland, and was born there in 1881. He went to Ipswich Grammar School, and for a year to Brisbane Grammar School. In 1902 he entered medicine in the University of Sydney. He became senior student at Saint Andrew's College and got his rowing blue in 1903, rowing four in the eight which won the inter-'varsity boat race that year. He also played football for his college and was a keen tennis player all his life. He graduated M.B., Ch.M. in 1906 and was first a resident medical officer at the Royal Prince Alfred Hospital and later at the Royal Alexandra Hospital for Children. In 1908 he was demonstrator in anatomy under Professor J. T. Wilson, and taught the writer, then a second year medical student. He then went into practice in Ipswich, and in 1912 married Isabella, daughter of the late Sir Mungo MacCallum. In 1913 he returned to Sydney and commenced general practice in Edgecliff. In 1920 he approached the present writer in the Department of Anatomy of the University of Sydney and asked for advice about research work, having determined to devote one or two afternoons of each week to research. From that date commenced a most profitable period of research, at first in collaboration with the writer upon the anatomy of the Australian aboriginal, and more particularly upon the facial muscles and nose of the aboriginal. Gradually extending the scope of his researches, he obtained his M.D. degree in 1925 for a classic research upon the action of the facial muscles in man, a work which is now generally accepted as the standard one on the subject. In 1927 he went to England and the Continent with his wife, and while there toured in his own motor-car through Italy, France, Germany *et cetera*, and also visited a number of universities and medical schools. On his return to Australia, he relinquished general practice and became a consultant physician in Macquarie Street. At the same time he began to give more time to research work at the University. Still further extending the scope of his studies, he published a series of papers, chiefly in *The Journal of Anatomy*, from about 1928 to 1940, upon the head muscles and branchial arches in sharks, amphibians, reptiles, monotremes, marsupials, and other mammals. The culmination of this work may be said to be his monograph entitled "Probable Homologues: A Study of the Comparative Anatomy of the Mandibular and Hyoid Arches and their Musculature. Part I", which appeared in 1939 in the *Transactions of the Zoological Society of London*.

He continued his research work for the first two years of the war. The death of his wife at this period was a great blow from which he never fully recovered. Foreseeing the shortage in teaching staff in the Department of Anatomy owing to the war, he commenced refreshing himself in dissecting room work, and unselfishly devoted much of his time in 1941, and quite two-thirds of each week in 1942, and half of 1943, to teaching in an honorary capacity

in the dissecting room. During the war he also acted as area medical officer for the Sydney University Military Area, and took part in "N.E.S." work, devoting considerable time to first aid teaching and examining. The writer believes that it was in part the extra burdens he so wholeheartedly undertook in the last two or three years which contributed to his breakdown in the middle of 1943.

In June, 1943, he collapsed with signs of heart failure and auricular fibrillation of which he had already had warnings as far back as 1935. From then on to his death, his activities were limited by constant illness.

His hobbies were bird observation and motoring tours, while he delighted in work where he could use his hands, as in a workshop. This same aptitude also showed itself in his dissecting instruments and armamentarium, which were always perfectly kept. He was a keen naturalist, and had

accumulated a considerable bird library, which he bequeathed to the University of Sydney, and he felt very keenly the sorrow of giving up his field glasses for military work. For many years he was medical adviser to "Ascham" girls' school nearby his home, and in 1937 became a member of its first Board of Governors, on which he served till 1942. Such is a brief outline of his life.

Reviewing his scientific activities, it will be seen that he was almost a unique figure. He, a practising medical man, decided to allocate part of his life, once he had established himself and made a competence, to research work. Within a few years he attained the status of an authority on the comparative anatomy of the vertebrate head. By meticulous dissections (a technique it might almost be claimed he rediscovered), by accurate observation reinforced by cinema studies, and occasionally by experiment, he contributed extensively to knowledge of the morphology, derivation, innervation and action of the facial and head musculature of vertebrates.

Professionally, he was the ideal family physician, well built, with a keen, almost austere, handsome face, often lit by a kindly smile, he inspired confidence. He was extremely thorough and painstaking in his clinical examinations, withal decided in manner and judgement. Conscientious and punctilious to the last degree, he also possessed a strong sense of humour. He combined many of the best qualities of the old school of physicians with the learning and scientific outlook of the moderns, and of him it could truly be said that he maintained the highest ideals of his profession.

In conclusion, the writer cannot do better than quote the final paragraph of an earlier notice, part of which he owes to Professor Stump.

> In manner and demeanour he was ever the ideal colleague, sound in judgement, critical without embarrassment, and sincere in statement. These qualities endowed him with a kindliness and loyalty which had its repercussions throughout the Department of Anatomy. His strength lay in his own rigorous standards sternly applied to himself both in the scope of his work and his relation to other people. His approach to any subject nearly always elicited some new viewpoint, often most refreshing in its robust simplicity and outlook. It might be triumphantly stated that he did not suffer fools gladly and was intolerant of superficial knowledge. His kindness and thoughtfulness for others led to his counsel being widely sought and greatly valued in his profession by his friends and by students. Those who were privileged to know and work with him have been enriched by his contact and service.

THOMAS PATRICK CONNOLLY.

We regret to announce the death of Dr. Thomas Patrick Connolly, which occurred on July 22, 1944, at Toowoomba, Queensland.

Notice.

A CORRECTION.

We are informed that an error has occurred in the notice published in last week's issue of the journal (issue of July 29, 1944). The notice concerned two meetings arranged by the Section of Neurology, Psychiatry and Neurosurgery of the New South Wales Branch of the British Medical Association. The first of these meetings, on August 17, 1944, will be held at the Department of Surgery, New Medical School, University of Sydney—not, as stated, at British Medical Association House, 135, Macquarie Street, Sydney. The second meeting, on September 7, 1944, will be held, as stated, in the William H. Crago Council Room, British Medical Association House, 135, Macquarie Street, Sydney.

Australian Medical Board Proceedings.

QUEENSLAND.

The undermentioned have been registered, pursuant to the provisions of *The Medical Acts*, 1939-1940, of Queensland, as duly qualified medical practitioners:

Alderman, Lawrence William, M.B., B.S., 1944 (Univ. Queensland), Turner Avenue, New Farm, Brisbane.

Aroney, Nicholas, M.B., B.S., 1944 (Univ. Queensland), 205, Boundary Street, West End, Brisbane.

Brunckhorst, Alfred Michael, M.B., B.S., 1944 (Univ. Queensland), "Midlothian", Stanthorpe.

Chalk, Newton Symonds, M.B., B.S., 1944 (Univ. Queensland), Cavendish Road, Nundah, N.E.3, Brisbane.

Cilento, Raphael Charles Frederic, M.B., B.S., 1944 (Univ. Queensland), 683, Ipswich Road, Annerley, Brisbane.

Dunn, Lillias Joan, M.B., B.S., 1944 (Univ. Queensland), "Doon Ville", Doon Villa Avenue, Maryborough.

Ferguson, Rupert Martin, M.B., B.S., 1944 (Univ. Queensland), "Winton", Marsden Street, Clayfield, Brisbane.

Fraser, John Clow, M.B., B.S., 1944 (Univ. Queensland), Park Street, Boonah.

Gregg, Thomas Richard, M.B., B.S., 1944 (Univ. Queensland), 45, Montpelier Street, Clayfield, Brisbane.

Hay, Robert Webb, M.B., B.S., 1944 (Univ. Queensland), 106, Virginia Avenue, Hawthorne, Brisbane.

Jan See Chin, Edwin Henry, M.B., B.S., 1944 (Univ. Queensland), 112, Chapel Street, East St. Kilda, Melbourne, Victoria.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Steinbeck, Alfred William, M.B., B.S., 1944 (Univ. Sydney), 21, Yarabah Avenue, Gordon.

Grattan-Smith, Padraic, M.B., B.S., 1944 (Univ. Sydney), Lismore Base Hospital, Lismore.

The undermentioned have applied for election as members of the South Australian Branch of the British Medical Association:

Noack, Beatrice May, M.B., B.S., 1941 (Univ. Adelaide), Mareeba Babies' Hospital, Woodville Park.

Sims, Eric Baldwin, M.B., B.S., 1940 (Univ. Adelaide), Adelaide Children's Hospital, Adelaide.

Leyland, Geoffrey Agar, M.B., B.S., 1944 (Univ. Adelaide), Royal Adelaide Hospital, Adelaide.

Gooling, Max Sylvester, M.B., B.S., 1944 (Univ. Adelaide), Royal Adelaide Hospital, Adelaide.

The undermentioned have applied for election as members of the Tasmanian Branch of the British Medical Association:

Cohen, Percy Harris, M.B., B.S., 1944 (Univ. Melbourne), Royal Hobart Hospital, Hobart.

Rassmussen, Winifred R., M.B., B.S., 1944 (Univ. Sydney), Launceston General Hospital, Launceston.

Wishaw, Fred, M.B., B.S., 1943 (Univ. Sydney), General Hospital, Launceston.

Ramsay, Hugh Thomson, M.B., B.S., 1944 (Univ. Melbourne), General Hospital, Launceston.

Books Received.

"The Use of Penicillin in Treating War Wounds (Instructions Prepared by the Penicillin Clinical Trials Committee)"; Medical Research Council War Memorandum Number 12; 1944. 9¼" × 6", pp. 16. Price: 3d. net.

"Medical Bacteriology: Descriptive and Applied, including Elementary Protozoology and Helminthology", by L. E. H. Whitby, C.V.O., M.A., M.D. (Cambridge), F.R.C.P. (London), D.P.H.; Fourth Edition; 1944. London: J. and A. Churchill, Limited. 8" × 5½", pp. 351, with many illustrations. Price: 14s.

"Demonstrations of Physical Signs in Clinical Surgery", by Hamilton Bailey, F.R.C.S. (England); Ninth Edition, revised; 1944. Bristol: John Wright and Sons, Limited. London: Simpkin Marshall (1941) Limited. 8¾" × 5¾", pp. 360, with many illustrations, some of which are in colour. Price: 25s. net.

"Individual Psychology Medical Pamphlets Number 23. Early Phases of Medical Psychology; History of the Society; Post-War Planning; Active Psychotherapy in Wartime; The Approach to the Patient; Analysis under Hypnotics", by Sir Walter Langdon-Brown and Dr. O. H. Woodcock, Dr. Alexander Baldie, Dr. Wilhelm Stekel, Dr. Allan Worsley, Dr. Culver Barker, Dr. H. V. Dicks and Dr. Ellis Stungo; 1943. London: The C. W. Daniel Company, Limited. 8½" × 5½", pp. 71. Price: 2s. 6d. net.

"A Provisional Classification of Diseases and Injuries for Use in Compiling Morbidity Statistics", by the Committee on Hospital Morbidity Statistics; Medical Research Council of the Privy Council, Special Report Series Number 248; 1944. London: His Majesty's Stationery Office. 9¼" × 6", pp. 168. Price: 3s. net.

"Gas and Air Analgesia", by R. J. Minnitt, M.D. (Liverpool), D.A. (R.C.P. and S. Eng); Second Edition; 1944. London: Baillière, Tindall and Cox. 6½" × 4", pp. 80, with illustrations. Price: 5s. net.

"The Diabetic Life: Its Control by Diet and Insulin: A Concise Practical Manual for Practitioners and Patients", by R. D. Lawrence, M.A., M.D., F.R.C.P. (London); Thirteenth Edition, with Wartime Supplement; 1944. London: J. and A. Churchill, Limited. 8" × 5½", pp. 250, with illustrations. Price: 10s. 6d.

"The Journal of Mental Science", by authority of the Royal Medico-Psychological Association. Managing editor: G. W. T. H. Fleming, in collaboration with Alexander Walk and others. London: J. and A. Churchill, Limited. 9" × 6", pp. 511. Price: 30s. net.

"Absence from Work: Prevention of Fatigue." Pamphlet Number 2, issued by the Industrial Health Research Board of the Medical Research Council; 1944. London: His Majesty's Stationery Office. 8½" × 5", pp. 20, with four illustrations. Price: 3d.

"Kaiser Wakes the Doctors", by Paul de Kruif; 1943. New York: Harcourt, Brace and Company. Sydney: Angus and Robertson, Limited. 8" × 5½", pp. 164. Price: 15s.

Diary for the Month.

AUG. 8.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
AUG. 8.—Tasmanian Branch: Branch Meeting.
AUG. 11.—Queensland Branch, B.M.A.: Council Meeting.
AUG. 11.—Victorian Branch, B.M.A.: Ethics Subcommittee.
AUG. 14.—Victorian Branch, B.M.A.: Hospital Subcommittee.
AUG. 14.—Victorian Branch, B.M.A.: Finance Subcommittee.
AUG. 15.—New South Wales Branch, B.M.A.: Medical Politics Committee.
AUG. 15.—Victorian Branch, B.M.A.: Organization Subcommittee.
AUG. 16.—Western Australian Branch, B.M.A.: Branch Meeting.
AUG. 17.—Victorian Branch, B.M.A.: Executive Meeting.
AUG. 22.—New South Wales Branch, B.M.A.: Ethics Committee.
AUG. 23.—Victorian Branch, B.M.A.: Council Meeting.
AUG. 24.—New South Wales Branch, B.M.A.: Clinical Meeting.
AUG. 25.—Queensland Branch, B.M.A.: Council Meeting.
AUG. 31.—New South Wales Branch, B.M.A.: Branch Meeting.
SEPT. 1.—Queensland Branch, B.M.A.: Branch Meeting (Jackson Lecture).
SEPT. 5.—New South Wales Branch, B.M.A.: Organization and Science Committee.
SEPT. 6.—Western Australian Branch, B.M.A.: Council Meeting.
SEPT. 6.—Victorian Branch, B.M.A.: Branch Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

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